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PART I.

ORIGINAL COMMUNICATIONS.

ART. I.—*Reports in Operative Surgery.* By RICHARD G. H. BUTCHER, Esq., M.R.I.A., F.R.C.S.I.; Chairman of the Surgical Court of Examiners, and Examiner on Surgery in the Royal College of Surgeons in Ireland; Surgeon to Mercer's Hospital; and Lecturer on Clinical Surgery.

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THE deformities resulting from the contraction of the cicatrical tissue, reparative after burns, has attracted, over and over again, the attention of practical surgeons towards remedying the evil—some patiently investigating the development of the process, and, upon acquired knowledge, striving to establish a mode of treatment likely to prevent the change, and to secure, as far as possible, the normal restitution of the part after the injury inflicted; while others have strained their ingenuity, judgment, decision, and operative skill to remove the distortion, set free unnatural connexions, and thereby restore lost functions to members, to organs, and to parts. In the whole range of surgery, so interestingly taught and elucidated by Dupuytren, there is not one subject which, in my opinion, he has handled with so great a grasp and power as the accident and its consequences under consideration—Burns. Surely the risks to which the poor sufferer from burn is exposed, primarily and secondarily, must call forth our warmest sympathies, our best exertions. From the time of the infliction of the injury to the cicatrization of the part weeks and months must elapse—from the time of the infliction of the injury to the cicatrization of the part hours, days, weeks, and months of pain and suffering must be passed through; and yet not all—danger constantly lurks round the sufferer; and often death seizes on the creature just as repair is accomplished, and we are about to exult in the successes of our practice.

Who, when a bad case of burn is confided to him, does not watch with apprehension the shock—the threatened, and often fatal, syncope—the imperfect or nervous reaction—the patient sinking exhausted under febrile tumult of the asthenic kind; or the deceptive lull which, in many instances, precedes this form of reaction, as we see illustrated sometimes in the old,—they may walk after the accident, yet be dead in 48 hours; or again, reaction of the sthenic type proving excessive, and life being endangered by the violence of inflammatory fever. And oh! how many perils threaten during the progress of this fever, by the implication of internal organs, especially the lungs, heart, and pericardium, the brain, and, later again, disease, extensive, of the intestinal mucous membrane, often

sufficient of itself to destroy life; and later still, more surely and certainly, isolated to a part, perforation of the bowel. Many dangers passed over, yet, remotely, in the end, tedious cicatrization, confinement, and discharge, are prone to peril the system by hectic; or the patient may die suddenly, cicatrization being nearly or entirely completed, and in a manner unaccounted for, even on dissection; while at any period throughout this struggle tetanus may supervene, and, as I have illustrated in the pages of this Journal by numerous cases, with but little prospect of remorse or subsidence.

Death escaped, life may be rendered very miserable by the deformity and impairment of function often inseparable from healing of the burn.

Diversified as are the deformities from burns, Dupuytren is of the opinion that they may all be referred to five classes:—

1. Those in which the cicatrix is too narrow.
2. Those in which it is too prominent.
3. Those in which it has formed extensive adhesions.
4. Those in which a cavity has been obliterated.
5. Those in which organs, or an organ, has been destroyed.

Springing from this extensive range, it may readily be surmised that the operations proposed must be varied and modified to suit the case. It is not my purpose here to dwell upon the complicated measures that may be demanded to rectify the vicious union—incision—excision—free detachment of the widely and deeply connecting bands—subcutaneous sections—excision of the cicatrix when limited—semilunar vertical incisions in the sound skin on either side, to permit of the wound being brought together, the edges adjusted, as in the urethro-plastic operation practised by Dieffenbach, and in that recommended by Gay, to facilitate the contracting process in old ulcers with matted edges and boundaries—transplantation of healthy structures, to fill up and cover in the gap the flayed part exhibits either after excision or transverse disunion, accompanied by traction sufficient for the restoration of symmetry. Many of these I have put into execution, several resulting in unparalleled success; and I am deeply impressed with the conviction that, by well-timed, well-planned, and boldly executed operations, closely followed by careful, sedulous dressing, and adjustment of mechanical appliance, according to the exigency of the case, more may be expected and achieved, than even has hitherto been accomplished in this most interesting, yet lamentable, department of our art. I shall now dwell upon the operation which I wish to bring

particularly forward, as novel in its character, and possessing many advantages, and applicable in cases of prominent cicatrices, be they thin or massive in their proportions. Before doing so, however, I shall detail two remarkable cases which, by comparison, become valuable, and their mention here most appropriate, as introductory to the particular mode of proceeding I wish to inculcate.

Years ago—I take the date from my case-book, November 29, 1845—a young man was admitted to Mercer's Hospital with hideous deformity after burn, analogous, in many respects, to the case which I shall presently detail, as to the nature of this distortion, but falling far short of it as to the abundant shedding, development, and contraction of the cicatrical tissue. The patient, William Smith, aged 16 years, had been burned severely five years before the date of his admission—his clothes having ignited as he fell asleep upon the hearth-stone before a large fire in his cabin—destruction of all the tissues on the left side of the neck resulted; protracted suppuration; gradual, slow, yet progressive cicatrization followed; contraction and deformity. The head soon was dragged down to the shoulder; or, when the head was raised to its proper position, then the shoulder was drawn up, being unnaturally elevated several inches above its fellow; the cheek, the mouth, the eye, the ear, were all drawn to the affected side. The whole condition of the part, the countenance, and expression of the patient are admirably represented in Plate II., Fig. 1, the drawing being taken from a fine cast in my collection. The following operation was performed the day after his admission, by the late Mr. Tagert. He made two incisions through the web, removing a large triangular or V shaped piece, the base three inches in length externally at its free edge, the angle close to the neck. Wherever the slightest tension presented itself, on the head being placed in the erect and natural position with the shoulder depressed, it was cut; every seam or root of the cicatrix, wherever straitened, was set free. When the necessary incisions were completed the exposed surfaces were much greater than could, by possibility, have been anticipated. The head, after this extensive dissection, was easily restored to the straight position, but the left eye and angle of the mouth were not much altered or materially rectified towards a better condition. After a few days, the report goes on to say, "An apparatus was applied to keep the head up from the chest, and towards the healthy side; it consisted of two iron wings, well padded, concave, to embrace each temple, connected posteriorly to a back piece which, inferiorly, passed off in two

expanded concave plates, to rest one upon each shoulder; the back piece had a movable slide upon it, so as to permit the neck-piece to be lengthened when necessary; and connected with the head plates, where they were attached to the back piece, was a horizontal screw by which the head could be elevated from, or depressed to, either shoulder. The lower end of the back piece was retained in place by a strap buckled round the chest, and the chin was supported by a strap and buckle, connected from one temporal plate to the other." This patient was retained in the hospital for five months, the part cicatrized, the greatest care apparently carried out in the dressing of the wound, &c., in a word, in its management, yet, at the end of the report, I find, "Dismissed March 30th, *not much improved.*"

In the catalogue of my museum I find the following report attached to the number of the cast, taken from the patient previous to operation:—"*Cast No.* 53: Distortion, the effect of severe burn. The subject of the injury was a young man aged 16 years, who had been severely burned, five years before, over the entire side of the neck; the present deformity is the result of the cicatrization of the part. The following operation was performed, but without much success:—A V shaped incision was made through the web, the base at its free margin, and the part removed. After this, wherever the integuments seemed tightened, the incisions were extended so as to liberate them freely; the exposed surface, after this proceeding, and on placing the head inclined to the right side, was far greater than could have been anticipated as the result of the incisions; the dragged condition of the eye and mouth were not, however, much benefitted, though the greatest possible care was taken in the dressing of the wound, and the nicest application of mechanical means to keep the head erect, and somewhat to the sound side; yet I must proclaim that little benefit was derived from the operation; though the patient left the hospital, after five months, considerably improved; yet, when I had seen him at a period of six months later, the web was nearly as prominent as before the operation, as indurated and unyielding in its nature."

I shall next detail the steps of an operation, with its results, which I performed on a boy aged three years. The principle of this method was recognised by Celsus; and certainly, in my hands, was followed by a considerable amount of success. The reason why I dwell upon it at all—why I select it from amongst several cases cut after various fashions—is, that it approximates more closely than any other the operation which I shall presently describe, and which

I claim for my name: its success only illustrates, even by the greatest care, a limited amendment, while mine yields a perfect restoration to normal position; neither, however, can bring back the natural colour, or remove the pittings that so frequently exist after the destructive influence of intense heat.

CASE II.—*Extensive Cicatrix after Burn, Binding Down the Chin to the Sternum, Rectified by Operation.*

John B., aged eight years, admitted to Mercer's Hospital, June, 1860. Three years before, he was severely burned about the throat and chest—his clothes having taken fire in front. He presented, on admission, a very pitiable appearance; his chin was bound down literally to the first bone of the sternum, so that the mouth was kept open, and the lower lip not only dragged downwards but prominently forwards; a strong, dense band of cicatrical tissue extended from the chin, in a puckered form, dragging down cheeks, mouth, lower jaw, and becoming expanded by wide-spread claws upon the fore-part of the chest, implicating deeply the integument over the upper thoracic region. So matted was this structure throughout the neighbouring parts, that the slightest attempt to raise the head produced additional depression of the cheeks, and even lower lids, distorting the eyes frightfully; the effort prolonged drew up the clavicles and shoulders. The simple deduction being amply demonstrated by the wide-spread and unyielding nature of the morbid connecting medium. For the appearance of the boy previous to operation, see Plate II., Fig. 2.

On the 20th of the month I operated after the following method:—The child, having been placed lying on the operating table, was quickly brought under the influence of chloroform; the knife was applied over the fore part of the chest by a semicircular sweep, about four inches transversely, the cornua of the curve being a little below the centre of the clavicle on either side, while its concavity embraced all the dense and central portion of the expanded cicatrix below, and fully an inch beyond of healthy structure. The depth of the incision went through the integument and fascia. This extensive flap was then dissected up; the head, at the same time, being elevated, and shoulders depressed, to make tense the binding shreds beneath. It was remarkable how quickly the parts retracted under the touches of the knife, and how high the flap ascended exposing actually the entire lower region of the neck; even as the

Fig. 1.

Fig. 2.

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parts were now exposed portions of the fascia had to be carefully cut through; and even some of the anterior fibres of the mastoid muscles on both right and left sides a little above their clavicular attachment; and, though closely in the proximity of the main vessels of the neck, restraining bands were sought out and divided; by a tedious dissection of this kind the head was got into its natural position. The gaping wound and the exposed healthy parts over the sternum were dressed with lint soaked in oil, and retained by a few turns of a bandage obliquely across the chest, and in a circular manner round the neck; outside this dressing was placed a piece of pasteboard, cut in the form of a stock, rolled in a piece of French wadding and linen outside, so as to make a stiff collar, and thus secure the head from being approximated to, or drooping on, the chest. A few days after this operation I freed the lower lip from the chin by subcutaneous section, and restored it to its proper place.

The effect of the two operations was most marked for good on the entire countenance; the case went on without any unfavourable symptoms; pressure, caustics, astringents, &c., being applied, according to circumstances, and the continued use of the collar persevered in. After a period of little more than four months the parts healed wonderfully well, the entire wound over the sternum and lower part of the neck being covered in by new structure; the motions of the head were nearly restored, and the deformity of the countenance all but removed; several inches were gained between the sternum and the chin; yet there was an irregularity of the surface, a knotted condition of the parts, very unsightly—at least so it would be considered in the female—here, however, it did not much matter, as a cravat would conceal all. On the whole, considering the hideous deformity of the child, I had reason to be well satisfied with the result; yet it did not at all merit the approval which the following operation, and its consequences, elicit and demand:—

Case III.—*Shocking Deformity after Burn—the Head Bound Down to the Shoulder—Perfectly Cured, with scarcely a Trace of Deformity, by a new Operation.*

Mary M'N., aged 17, admitted into Mercer's Hospital, under my care, June 18, 1860. The young woman was greatly deformed from severe burn, which she sustained four years before. Her parents stated that her clothes took fire, and were reduced to ashes upon her neck; all the skin upon its left side and behind was turned

black—charred; and the shock was so great that her life was despaired of for many days; her head was affected too; and yet from this complication she escaped. Days and weeks the black slough was separating and being cast off; and on several occasions she had a hard struggle for life. However, after long confinement, the part cicatrized, contraction going on, and ultimately to the extent of connecting closely together the head and shoulder on the affected side. To be more particular, the condition of the patient, on admission, was as follows:—The expression of the face was most pitiable, though the features were handsome; yet the days, and months, and years of misery were stamped upon them, giving the countenance the most painful cast. The head and shoulder reciprocated in their bondage, each being distorted hideously, the former more from its symmetrical position—the head, as it were, being dragged down to the left shoulder, slowly, steadily, tenaciously, as far as the cervical spine could yield; then the uncompromising agent—contraction—still persistent, energetic, even against gravity, brought up the entire shoulder from its normal position, and approximated it to the more fixed part; the cicatrical tissue, active in all this displacement, filling up the angle between the shoulder and head, was most extensive and massive, attached above, and expanded upon the mastoid process of the temporal bone, and far behind for two-thirds of the transverse extent of the occipital bone; wide and expanded, I say, here, at its upper attachments, while from the mastoid process, in its course downwards to the shoulder, its proportions were most dense, and firm, and resisting. The base of the cicatrix, as it passed from the temporal bone to the shoulder, was three inches and a half, while in thickness it varied from an inch and a half to an inch and three quarters; it was dense, fibrous, elastic as India rubber, not sensible to the touch, neither discoloured by vascular supply, yet bands and spotted depressions, whiter than the surrounding integument, dotted it throughout; the neck, by this rigid, powerful cord, was forced down to the left side as low as the bones would permit; and it was only by lifting the shoulder, thrusting it up to the extreme, that the head could be brought into a straight position, or into its vertical axis. Where the cicatrix grasped the shoulder it did not terminate abruptly; from it numerous roots or claws spread out—some backwards over the dorsum of the scapula, some over the superior attachment of the deltoid—while the anterior margin of the trapezius seemed to be incorporated in its structure: thus the whole mass was most

uncompromising in its character. The condition of the patient previous to operation is most faithfully depicted in Plate I., Fig. 1, by the able hand of Mr. Forster, of Crow-street.

On the 20th of June I operated after the following manner:—The young woman was stretched on the operating table, and rendered insensible by chloroform; she was rolled gently over on the right side, so as to render prominent the affected shoulder, and bring up well to view the neck and the vicious cicatrix throughout its entire grasp. The parts being put upon the stretch, the knife was first laid on the integuments over the acromial fibres of the deltoid, about half an inch lower than this osseous point, and carried downwards and backwards with a deep semicircular sweep, and terminating behind and above the bifurcation of the spine of the scapula; thus the knife travelled in a very curved manner, marking out a flap fully two inches and a half below the expansion of the central massive band of the cicatrix; the most convex part of the curve corresponded in shape to the arrangement of the inodular tissue, the same extent of sound skin being preserved all round; this flap was rapidly dissected up, great care being taken not to bruise or injure it, lest its vitality should be impaired, and that thus it might refuse the union or perish altogether; its detachment was with ease effected until the knife arrived at the matted down disorganised structure, when the knife had to be used with more decision, deeper, and with more force and freedom, at the same time that the assistant who had charge of the head made greater traction upon it towards the sound side, while a second assistant depressed with more vigour the affected shoulder. By these opposed forces deep passing bands were made to appear, and readily yield to the edge of the knife. A long, cautious, I would say, protracted dissection of those in-passing roots was required at the posterior triangle of the neck; and, to give some idea of the extent of the detachment transversely, or from before backwards, it measured somewhat more than four inches and a half. When this extensive base, deep set and bound down in all directions, incorporated with the fascia and involving tissue even beneath it, was set free, it was gratifying to find how the head and shoulder permitted separation, but yet not nearly enough. At this stage of the dissection the parts stood thus:—The exterior flap of several inches was detached, which, as the head was elevated and the shoulder depressed, slid up, as it were, above the clavicle; the healthy integument composing a considerable part of this flap hung flaccid, while the cicatrical tissue

set free so extensively at the root of the neck, and incorporated with the trapezius, having also ascended, owing to detachment and force, for a considerable way, stood prominently out and resisted any further advantages by this method. Throughout this extensive dissection but very little blood flowed—nothing that was not easily controlled.

I next had the flap carefully held up, and put upon the stretch, and then carefully introduced a long narrow-bladed straight bistoury through the massive cicatrical tissue at the base of the flap, and thrust it upwards subcutaneously, along the prominent band to the summit of its temporal and occipital attachment. As the instrument was forced upwards great precaution was used to prevent its point injuring the integument in this long track of from four to five inches; the instrument being introduced upon the flat, its edge was now made to cut down freely from the integument the cicatrical tissue by cautious gentle movements. This being extensively and effectually done on the posterior side of the prominent ridge, the edge of the bistoury was then turned anteriorly, and a similar manipulation carried on. The edge of the instrument was next turned directly backwards, and the cicatrical tissue scored freely by repeated incisions from before backwards and above downwards, throughout its entire extent. To facilitate and render more guarded and certain the action of the bistoury the index finger of my left hand, placed outside the integuments, followed it everywhere, and made additional pressure where requisite; thus, from the consent of action between the two hands, the incisions were perfected with as much accuracy as if exposed to view. Again, as the bistoury worked inside, the index finger of the left hand assisted to separate, to press out, to unfold, as it were, this matted structure. The result of all this subcutaneous proceeding was rendered manifest by the relaxation and flattening of the vicious growth; and on the bistoury being withdrawn the flap lay as flat upon the upper and middle part of the neck as the healthy integument did at its base.

The operation was necessarily tedious; yet, from the admirable way in which the chloroform acted, the creature was unconscious as to pain or suffering: when she had recovered from its influence, I proceeded to dress the part; and upon this proceeding I would wish to be most explicit. In another place I have laid great stress upon the rules which the surgeon should adopt towards saving the flap from undue pressure, being handled or bruised: it should, in all instances, be raised or made tense, as occasion may require, by the

application of forceps; the instrument will only press or even wound the merest point; it will not, as the fingers, compress it in extent, arrest its circulation, and so threaten its vitality This rule was stringently carried into effect in the present instance. The head was gently inclined to the right shoulder, and steadied so by a few turns of a bandage; compresses were softly applied over the detached integuments and flap so as merely to sustain them in position, to keep them in contact with the parts beneath; and these, again, retained by wide straps of adhesive plaster. I cannot be too impressive here in laying stress upon the way in which this extensive and delicate flap was dealt with. Very little pressure would be sufficient to rob it of its circulation, and so deprive it of accepting of the union offered by the raw surface beneath; therefore it was sedulously guarded against. The arm on the affected side was fastened to a girth round the waist, which efficiently kept the shoulder down. The raw surface from whence the healthy flap was dissected and pushed up presented a wound of considerable magnitude, as large nearly as the hand; thin pledgets of lint, soaked in oil, were laid all over it; these again were covered with a few folds of old linen; and the entire supported by additional straps of sticking-plaster. The patient was then conveyed to bed, and made to lie upon her back, with her head resting on the same plane as her body. By this arrangement there was no approximation of the head and shoulders, and therefore no disturbance of the dressings. On looking at the girl, as she lay in bed, no one could, for a moment, have supposed that by operation the countenance could have undergone so wonderful a change—so marked an improvement. But I shall more particularly dwell upon this matter again. For several days after this severe proceeding she suffered pain; but opium never failed or lost its influence in restoring quiet or procuring repose.

For several days the stomach was upset, and the appetite impaired, owing to the amount of chloroform inhaled, and the restrictions as to position enjoined. Prussic acid, laurel water, and ice, with sedative counter-irritation to the surface were efficient and salutary agents. For days the restricting bands on the head and arm remained untouched; and it was not until the fifth day the dressings on the neck and shoulder were removed. To accomplish this end every portion of the dressings were saturated with tepid water, and the greatest gentleness used in their separation; the adhesive straps readily yielded; and each portion of lint over the flap was gradually turned over, not directly raised, the fingers of

the left hand gently following, thus sustaining the flap, and preventing any interference with its newly-acquired cohesion. So, likewise, the oiled lint was readily removed from the raw surface. On the part being fully exposed, it was most gratifying to see how accurately the flap remained in its adjustment—how flat, regular, and even the neck preserved its outline; no part whatever showed an angry disposition. So the dressings were readjusted much as before, and after the same fashion—the greatest care being taken to guard against, and prevent the slightest movement of the head or shoulder from that position in which they were both retained from the first. Five days later the wound was again dressed; similar precautions being adopted. And now it was apparent that all that portion of the cicatrix which had been subcutaneously detached, incised, folded out, was adherent in its new relations, and had no tendency whatever to projection or starting out; on the contrary, it took the shape impressed upon it at the time of operation, and retained it until the shed lymph and adhesions within united it there. The exposed surface below presented a granulating appearance; the dressings were put on in the same way as at first, the straps of plaster only being laid on tighter.

During a period of three weeks but little alteration was made in the mode of dressing; at the end of this time, union between the parts being so firmly contracted, and thus the life of the flap secured, I guarded against a recurrence of irregularity by the following procedure:—Having procured a quantity of thinly-rolled lead, such as is used in packing tea, I folded up several layers of it, and, by gentle manipulation, moulded it to the side of the neck and shoulder, it lying in with great obedience to every inequality of the part; a thin layer of French wadding was interposed between it and the skin; broad straps of sticking-plaster, 12 to 16 inches long, brought from the back, and across the shoulder, to the chest and neck, steadied it nicely in position. From day to day these straps were carefully attended to, lest any undue force might be exerted, and the part suffer from this even, steady, solid pressure, and they were relaxed, tightened, or replaced, according to circumstances. The inferior granulating surface showed a strong disposition to throw out flaccid, languid granulations; an additional piece of lead placed over it, thin folded little pledgets of lint being interposed, exerted a most salutary influence on its repair. No attempt was made to limit this sore by making traction on its edges; on the contrary, all efforts tended towards having it healed by

replacement—by an extensive granulating surface fairly cicatrized; every precaution was adopted, even in the application of straps to support the compresses, so that the edges should not be drawn together; for the centre of the strap was placed, as it were, over the centre of the wound, and then its ends carried, at the same time and with the same degree of force, to the healthy integument on either side, so that the edges of the sore were rather pressed back than otherwise.

The case altogether was seven months under treatment. Through out this time the greatest caution was adopted relative to the position of the head, the gentle steady support to the neck, the topical applications, and mode of support to the granulating part; and from the necessity of enforcing abundant reproduction of structure and new skin, the healing was delayed, often stationary, and only again restored to healthy action by the most painstaking and careful dressing, steady strapping with adhesive plaster, gentle stimulation by red precipitate, nitrate of silver, &c.; and above all, I must particularise a lotion which I have found more beneficial than any other application, in life-giving properties, in these cases of languid surfaces, flabby granulations, &c. The fluid consists of water, say, eight ounces—tannic acid, a drachm—sulphate of zinc, a drachm—small pieces of lint, folded into pledgets about the size of a half-penny, should be soaked in this fluid, and laid evenly upon the surface. A narrow marginal dressing of lint smeared with zinc ointment being first laid on; the entire should then be covered with a piece of lint, spread over with the same salve; and the whole part supported by inch-wide straps of adhesive plaster—one made to overlap the other, and afford the necessary support. This dressing, I repeat, was most advantageous in this special instance, and conduced, in a very remarkable way, to the restoration of so extensive a surface without puckering or contraction.

It is 10 months since the young woman left the hospital cured, and 17 since the operation; yet there has been no disposition whatever to a recurrence of deformity—to projection of that cicatrical tissue so cut up and folded out. My impression is, from a very careful examination of the part, that it has been absorbed or removed in a great degree. Be that as it may, the part shows no irregularity or unevenness, though time sufficient has been allotted for such changes, if they were likely to occur. A few days ago I had a drawing of this young woman made by Mr. Foster, and engraved by him. It is a most perfect resemblance in every way—(See

Plate I., Fig. 2); and I think it is not too much to say she is a very pretty creature. There is no elevation whatever upon the neck, and no disfigurement, save the little dotted white points which I have before alluded to as being produced by the intensity of the applied heat. The hair, as it is gracefully bound, conceals even those traces behind. Marking the large surface from which the flap was dissected and shoved up, is a more vascular condition of the newly cicatrized part; but this may be entirely concealed by a chemisette or high dress. The movements of this young girl's neck are free, unrestrained, and graceful; while the left shoulder holds its rightful position as contrasted with its fellow. This restitution from deformity has likewise wrought a marvellous change upon the spirits, the aspirations, and the hopes of this young creature. I may add, that I have recently performed, in private, an operation almost similar to the one just detailed, and it promises to be in every way as successful.

Resection and Removal of Bones.—In continuation of the subject of resection and removal of bones, the following cases, I conceive, afford many important points for consideration; and, moreover, they are highly illustrative of the reparative efforts that may be looked for, and surely depended on, in the earlier periods of life:—

Case IV.—*Death of the Shaft of the Femur from Fracture. Protrusion of One End of the Dead Bone, with Shocking Deformity. Extraction of Six Inches and a half of the Bone. Limb Restored to nearly its Full Length, and Consolidated by the Application of "Butcher's Splint."*

Eliza C., aged 13 years, admitted September 26th, 1860, into Mercer's Hospital. Eight months before, she was thrown down by a dray, and the wheel of this heavy waggon passed over the centre of the left thigh bone, breaking it just below the lesser trochanter, and at the same time inflicting the most severe bruising and contusion; from the disruption of soft parts effusion set in so rapidly that in a short time the limb exceeded in magnitude the sound one by seven or eight inches, and from what I could learn, masked, to a certain extent, the nature of the fracture. The girl was kept at home and managed there, and the parents had the candour to admit that the patient was most ungovernable, and did exactly what she liked, so that no arrangements or directions made or given by the

gentleman who attended were either carried out or acted upon. Soon the consequences of all this neglect became apparent, inflammation exceeded its proper bounds for the effusion of lymph and the deposition of callus; it attacked the periosteum and the bone, detaching the one, and killing the other, these changes no doubt being brought about more actively by the impressed violence at the time of injury; the whole shaft of the thigh bone perished, and nature made the effort for its extrusion by the formation of a large abscess, corresponding to the original solution of continuity in the bone, and steadily determining to the surface. Through all these local changes the constitutional distress and excitement were extreme, the patient passing through nights of watchfulness and pain, distorting the limb on pillows, and changing it constantly from one position to another in search of ease; at length the abscess gave way on the upper and outer side of the limb, and shortly after the upper end of the lower fragment of the thigh bone appeared in the aperture, and once so, the contraction of the muscles forced it out still more and more, all resistance to its extremity being removed. Again, from the patient constantly propping up the leg and knee with pillows in the hope of relieving pain by relaxing parts, the shortening of the thigh was still further favoured, until at length it lay absolutely on the abdomen with the leg rigidly flexed upon the thigh. Her health was now so completely broken down, and her nights and days of misery so continuous and prolonged, that she was brought to hospital and placed under my care.

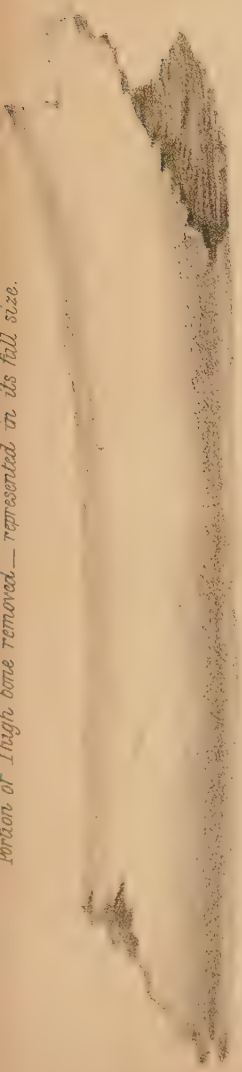
Nothing could present a more wretched aspect than the child, the very life-springs seemed sapped by the long-continued irritation and withering fever. Emaciation of the whole body had taken place in a most remarkable manner, and the face of this young person had assumed all the contracted wrinkled characters of age, except the eyes which were lustrous, projecting, and expressive of watchfulness even to irritability; the mouth too had characters of distress, the angles somewhat retracted, lips thinned, white, and tightened, with the teeth partially exposed and coated with a yellowish paste; the hair had considerably fallen out, and the skin over the face, hands and chest, was moist and clammy, while that over the abdomen and affected lower extremity was dry, furfuraceous, and scaly; the pulse was so rapid as scarcely to be counted, and it was weak and feeble, and even irregularly intermittent. And now as to the condition of the limb—as I have said before, it lay drawn

up upon the abdomen, distorted in the most striking manner; not only was the upper fragment displaced in this direction, but all that below the solution of continuity was likewise drawn up, with the upper end of the lower fragment thrust out, projecting two and a half inches; thus the thigh was shortened, and curved here in a remarkable way, and lay so closely on the abdomen that it was only by steady pressure the fingers were permitted between both surfaces; in like manner the leg, emaciated and powerless, lay rigidly upon the posterior surface of the thigh, and could not by any gentle traction be stirred from its long acquired position. After a long and painstaking investigation of the case, I came to the determination to try and save the limb. The healthy state of the knee joint, the non-implication of the hip joint, the integrity of the leg and ankle, conspired to make me adopt this view; yet, on the other hand, the difficulties which seemed to surround the case appeared almost insurmountable. The extraction of the dead bone, and that to so great an extent as the probe indicated—the bringing of the powerfully flexed upper fragment and knee from off the abdomen, and restoring them in their original direction—the unbending of the long flexed leg from the thigh—all this accomplished, the extension of the limb and its maintenance from retraction; and lastly, the all-important question as to the compensative powers of nature in the restitution of so extensive a portion of the osseous structure, and the adaptativeness of the new material to the original design and functions of the part.

On the day after admission, the child being placed under the influence of chloroform, the projecting dead bone, which was partially loose, was grasped in the blades of a strong forceps, and after some to and fro and partially circular movements, the concealed end was started from its connexions and drawn out. It was now confirmed that the shaft of the bone had perished for six inches and a half in length; the preparation is in my possession, and depicted in its full size in Plate III., Fig. 2; but a slight flow of blood followed the removal of this extensive portion of bone, and I was rather sorry to see the deficient vascular supply, lest it might be indicative of the reproductive functions of the part being at fault, for up to this time but little thickening was present, or deposition of new material. On the removal of the support which this deadened bone afforded to more than the lower two-thirds of the limb, the curve and flaccidity became still greater and more disheartening, yet by gentle and continued force—the child under chloroform—I

Fig. 1

Fig 2.



Portion of Thigh bone removed — represented in its full size.

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drew it down longer than before, and applied a well padded scored splint around it. I next commenced to bring down the limb from the trunk, first being only able to insinuate a thin pad between it and the abdomen, and likewise a thin one between the leg and thigh; from day to day I steadily increased the bulk of these in each position, and had them, as space was gained, formed into triangular wedge-shaped supports, maintained and made more effective by the proper pressure and support of bandages around the pelvis and the limb, in a figure of eight form. When the leg was brought a little beyond a right angle, then a splint was laid behind the limb from the tuberosities of the ischium above, to about the lower third of the leg; the limb was stretched upon this as far as it would yield, without much pain, and all the space between it and the under surface of the limb padded, so as nearly to fill the arch; a bandage was then carefully rolled from the foot upwards, and of course as it ascended, with a moderate degree of tightness around the limb and splint; this gently applied force tended to press the knee back, and thus gradually to straighten the leg and thigh.

After considerable trouble and repetition of dressings, at the end of about three weeks I had the limb sufficiently down to apply my own splint: now the reparative material was becoming abundant, and though it was moulded in a certain degree by the restraint of the scored splint, yet it was apparent that a greater force should be employed, and extension freely made and permanently kept up. On the 20th of October I applied my own splint; having first drawn down the limb by long, steady, and powerful traction, kept up for nearly twenty minutes. An assistant fixing the pelvis and upper fragment, I clasped the knee with both hands and steadily drew it in an opposite direction downwards, thus greatly elongating the thigh, and bringing it to within two inches of the length of the sound one; a second assistant then took my place, and kept up this extension, while I adjusted the long splint; a well padded yet narrow lac was placed along the descending ramus of the pubis and that of the ischium, the ends brought up behind and before, a layer of French wadding being interposed; the long splint was then laid along the outside of the limb, properly padded, and the foot fastened to it below; the ends of the counter extending lac were then brought through the holes of the splint which reached to the arm-pit, and tightly tied. Thus the limb was maintained at the extreme point of extension that it could bear, and, as it was necessary to support it behind,

in order to bring in an additional force, a splint was laid along its posterior surface, and the concave space between it and the limb filled with soft pads; then a roller was applied from the ankle upwards, lashing the leg to the long splint, and, as it ascended to the knee, supporting in its turns the posterior splint, and so pressing the knee backwards, and thus still more tending to straighten it. So on, the roller was continued up to the groin, and then made to pass across the pelvis and the upper part of the long splint, in a figure of eight form, and so maintaining it to the trunk and thus securing the limb in a straight line. Some simple dressing was laid over the ulcerated opening, from which escaped a very trifling quantity of healthy pus.

After a fortnight's application of the splint in this way, the limb became perfectly straight, the knee on a level with the sound one. I need scarcely mention that, during all this time of trial, the little patient was exceedingly intolerant of treatment, yet, by management she was compelled to submit, all due caution being observed to mitigate her sufferings in every way; indeed she was forced to admit she did not suffer nearly the pain that she endured before she came to hospital; independent of her statements altogether, her improved appearance bore testimony to the fact. No doubt suitable food, stimulants, and opium, in abundance, were administered with a free hand, and conduced to this end. Her sleep returned and appetite sharpened, blood was abundantly made and healthily appropriated to the restitution of tissues, and so the languid and debilitated frame was strengthened, and nervous energy invigorated. Thus these important changes were brought about by the most assiduous care, within a period of three months. The bringing down of the limb, the straightening gradually of it, was a trying and wearisome process, I admit, yet I could not for a moment warrant any more expeditious or violent mode. It might be presumed, if the patient was placed under chloroform and rendered insensible, the thing might be done at once. Well, I apprehend, if it had been so dealt with, the disruption of parts that could not so suddenly or readily yield would have led to the formation of abscesses, precursored by active and wide-spread inflammation with its concomitant train of additional evil disturbances.

January 1, 1861. The report goes on to state that the girl had lost all her characteristic delicacy, that she had become fat and robust —that the reparative material effused, though deposited slowly at first, yet was then in abundant quantity, not only filling up the

extensive gap between the upper and lower ends of the thigh bone, but likewise sufficiently massive in its diameter; and it was becoming firmer every day. During all this time permanent extension was guardedly kept up, and the limb was only two inches shorter than its fellow, and it was maintained throughout in its proper axis—the transverse piece of wood upon which the splint rests preventing inversion or eversion. Towards the end of the month the uniting medium was perfectly solid and unyielding; and on the 1st of February she was dismissed cured. I have seen her since then, on several occasions, and the power of the limb and its movements have steadily increased. Nine months have now passed over since she left the hospital—she came specially at my request, in order that I might have a drawing made; the drawing and the engraving have been executed by Mr. Forster, of Crow-street, whose name is a sufficient guarantee for its faithfulness and execution. (See Plate III., Fig. 1.) Her condition now is as follows:—she is strong, healthy, and robust; as she stands at rest no one would suppose that there was anything amiss with her; on the most accurate measurements her left thigh is scarcely two inches shorter than the right, and a boot raised with cork on the inside so perfectly compensates for the deficiency, that it is scarcely perceived; she has only a slight halt in walking, the functions of the hip and knee joints being entirely restored. The case, in all its bearings, presents to my mind as many important points for reflective study as any on record, while the practical deductions flowing from it cannot be over-estimated.

Case V.—*Extensive Caries of the Upper and Lower End of the Tibia; Excision and Gouging out of the Diseased Bone; Perfect Recovery, with the Functions of the Knee and Ankle Joints Preserved.*

Eliza Martin, a fair-haired girl, aged 10; admitted to Mercer's Hospital, February 12, 1861. She was reduced to the lowest state from long-continued disease of the left tibia. Above and below, the bone was affected. So apparently incurable did the case appear, and so emaciated and depressed the patient, that amputation of the limb had on several occasions been proposed, previous to her being put under my care. On the above date she was in the last stage of hectic; she was thinned and worn out from profuse colliquative sweats, with alternating diarrhœa; her sleep was unrefreshing, and

for nights absent till the approach of morning. Appetite capricious and very small; and the process of nutritive assimilation altogether subverted. The pulse was rapid, feeble, and small; and there was a general irritability about the child painful to witness. The nervous symptoms assumed a very definitive character. For several weeks before the child's admission she was attacked by chorea; and this condition maintained in the most aggravated form, even in conjunction with the characterized fever that I have just alluded to. The history of the case pointed to the facts—of injury sustained from falling down a ladder producing violent inflammation over the tibia, above and below, and its extreme ends, save the articulating surfaces—of injury inflicted where the leuco-phlegmatic temperament predominated, when, after the subsidence of acute inflammatory action, a low, mischievous, disintegrating action was set up in the stricken parts, terminating in abscess of the soft parts covering the bones, and caries of their structure. From this local injury, extensive both above and below, the constitutional symptoms alluded to were evoked. The constitutional and local symptoms were each so developed in their way that amputation seemed not an unreasonable proposal. Yet, from the successes which I had obtained, in almost similar cases, by excision, I determined on cutting out the diseased bone in each position, and straining every effort to save the limb.

February 20th.—The girl was placed on the operating table, and rendered insensible by the administration of chloroform. The limb being steadied above and below, I made an incision about four inches in extent along the anterior and inner surface of the expanded head of the tibia, through the ulcerated soft parts; their integuments were freely dissected from off the bone, revealing a very large extent of it softened, discoloured, some broken up, and carious; the compact layer in front being decayed. The point of a fine Luer's saw was introduced, and made to cut effectively, so as to give full room for manipulation with the gouge; nothing could answer the purpose better than this instrument. Great care was taken not to interfere with the upper articular surface of the bone, many layers beneath it being fortunately healthy. From this point downwards, about three inches of the cancellated texture of the bone together with its anterior and lateral walls, were freely and cautiously removed, while the posterior wall, with a stratum of the cancellated tissue, being healthy, were suffered to remain, and so maintain the integrity and continuity of the bone. I next proceeded, in a like manner, to deal with the lower end, but had to contend with a little

more difficulty. The wall of the bone here was not softened to the same extent as that above, though the disintegration internally was nearly to as great an extent. Examination with the probe, through the small aperture that led to the interior, confirmed this view; an abundant supply of sanious pus persistently welled up and flowed over from it. The integuments being divided to about three inches in extent, the bone was freely laid bare on its anterior and inner surface, and immediately over the ankle. The crown of a trephine was applied, and an opening being freely made with a fine saw, the aperture was increased, and so the carious cancellated tissue gouged out to nearly two inches in extent. The same watchfulness was had in requisition here, as above, not to impinge on the articular surface of the bone. The entire disorganised part being taken away, the cavities, both above and below, were filled with long slips of lint soaked in oil, and pressed down firmly into every recess; a mode of dressing which was perfectly effectual in stopping hemorrhage, giving due support, and stimulating, by its presence, healthy action. The limb was then carefully rolled, and, as the bandage passed up, an additional compress placed over the wounds so as to retain steadily the internal adjustment; next, the limb was placed on a padded splint, extending upwards nearly to the buttock, and retained immovably by a bandage, so as to prevent any flexion of the knee joint.

During the time necessary for this severe operation the child was kept under the influence of chloroform; and, on this agent being discontinued, she quickly awakened to consciousness, and quite unaware of what had been done. Very trifling fever followed the operation; all irritation was subdued by opium; I have no fear of it, even in children. Five days were allowed to pass over before the wounds were dressed; the lint was easily removed, as already healthy pus began to be secreted from each cavity. It was interesting to observe how, day after day, accessions of granulations were added, and tone was imparted to their growth by the gentle pressure of the lint, compresses, and bandage. A fortnight had not elapsed when the beneficial effects of the operation were becoming evident; the sweats ceased, and the diarrhœa disappeared; the pulse came down many beats, and the sleep returned; food was eagerly sought for, and healthily assimilated; and, at the end of the third week, the chorea had disappeared. I must state here that tonics, zinc, iron, &c., were administered; but I cannot separate, in my own mind, her altered state—her rapidly mended condition, from the soothing

effects produced by an operation that at once took away the primitive source of irritation and debility. Months passed over, and so the child's health was improved; and gradually the granulations filled up the large chasms cut out, and ultimately assumed a firm, dense, and osseous character, competent to take the office of that which they replaced. A month since, the child left the hospital perfectly cured. A long time was requisite to repair the shattered health—the rotten bone. Operative surgery, in fact, did for both what medicine could never achieve—what the *vis medicatrix naturæ* was incompetent to effect. As the bone was repaired so was all swelling dispersed, both in the limb and contiguous joints; quickly the knee and ankle regained their motions, their perfect movements; and, as the repaired shaft of the bone was restored to solidity, so did it bear with impunity the weight of the body, and the shocks transmitted through it in progression. This young girl, that was certainly doomed to be mutilated for life by amputation, is now running about with her playfellows, rescued from deformity by a better mode of treatment—resection.

Case VI.—*Complicated Amputation of the Leg, to save the Knee Joint, demanding Ligature of the Popliteal Artery as a Secondary Proceeding; Pyemia Successfully Treated by Mercury and Stimulants. Recovery.*

R. H., aged 17 years, admitted to Mercer's Hospital December 31, 1860. In childhood she had been a miserable martyr to scrofula, which, after marking the neck, arms, and some parts of the trunk, remained in abeyance for a few years—however, for the last eight years she has been a constant sufferer. The soft parts in the ham, back of the thigh, and calf of the leg were attacked with scrofulous deposits throughout, running into deep and extensive ulcerations, followed by rigid cicatrices contracting the leg upon the thigh at an obtuse angle, and permanently maintaining it so. After long and weary confinement these parts were healed in this deformed way; scarcely were they so when the same disease attacked the soft parts and bones of the tarsus, toes, and ankle joint of the same limb; wide-spread ulcerations and caries at length settled in the part. At times nature seemed to make an effort at repair, but in a few hours all improvement would be swept away. After repeated and fruitless attempts through a long succession of time—eight years—no permanent improvement could be produced, or any change, to be relied

on, effected; and so her health gradually gave way, and her strength declined under wasting fever. When she came under my care, the limb was a deformed shapeless mass, totally spoiled in its proportions and integral parts. The leg was considerably flexed on the thigh and fixed so, all the integuments covering the calf and its muscular structure were deeply pitted and matted together; while the soft parts and bones of the foot assumed a most shapeless mass, three to four times its normal size, extensively ulcerated, pouring out copious fœtid discharge, and accompanied always with pain, but of an intolerable character when the patient moved about in the erect position with the limb dependent. The young woman supplicated for its removal, and indeed there was no prospect of relief by any milder method; to save the knee joint was an all-important consideration, and to effect this object I planned an operation somewhat similar to that which I have described at the end of my Second Memoir on Excision of the Knee Joint.[a] The patient being carefully managed for about a month after her admission to hospital; on the 1st of February I operated in the following way:—The patient was placed on the operating table and brought under the influence of chloroform, and the femoral artery commanded at the groin. Standing on the right side of the patient I cut out a long flap from the anterior surface of the leg, and fully two-thirds of its length; this was rapidly dissected up and maintained by an assistant. I then transfixed the only healthy part of the calf from its outer side, and cut it free; I next carried the blade of the amputating knife along the outer side of the cicatrix in the thigh to its highest attachment, then along its inner side in a similar manner; the incisions, from the obliquity given to the knife, cut out the cicatrix in a wedge-shaped form, the base externally; this being detached, the bones were freed from the soft parts and sawn across, with a slight curve in front, about two inches below the articulation; numerous arteries spouted, seven or eight considerable vessels were tied, besides the posterior tibial and fibular arteries, which were cut very high up—immediately after their origin; this could not be avoided as the vessels were incorporated with the back of the cicatrix. The flap was now closed, and the patient allowed to rest for some minutes after revival from the chloroform. Just after being removed from the operating theatre arterial blood gushed out from the stump; fortunately I was beside the patient as she was carried away, and at once grasped the

[a] Dublin Quarterly Journal, February, 1857.

part, and had her brought back to the operating table. An assistant made pressure on the femoral artery at the groin with the end of a key covered with flannel, before I relaxed my steady gripe which commanded the vessel. I found that, owing to the causes necessitating the ligature of the posterior tibial artery so close to the main trunk, and not having probably sufficient hold, it was forced off during the movement of the patient by the impulsive current from above. I made a vertical incision over the popliteal artery, and ligatured it at the angle of flexure, carefully liberating it from the vein with which its connexion was very intimate. After this proceeding the patient was removed to bed, the thigh elevated, the stump evenly supported, and the long anterior flap slightly curved backwards and rested on the pillow; thus the entire was left to glaze. Wine and opium were administered rather freely, as the pulse was laboured and shabby.

At 3 o'clock, P.M., five hours after the operation, I proceeded to dress the stump, the patient being again placed under the influence of chloroform. I first connected the external and somewhat posterior short flap, through the entire of its extent, about three inches, with the outer side of the anterior long one, by several points of wire suture; I then folded the long anterior flap over the curved ends of the bones and up along the posterior surface of the thigh, it fitting admirably into the deep sulcus from which the cicatrix was cut out. Numerous points of the wire suture were employed to retain it in accurate position; by the turning back of the long anterior flap in this manner it will be understood how it had, as it were, contained in its curve on the outer side, the short external and posterior one, so that the short flap was stitched to it throughout its entire circumference at isolated points. Nothing could be more accurate than the adaptation of these parts; each fitted admirably to the other. In order to give additional support, long compresses were laid over the flap in the axis of the limb, steadied by longer straps of adhesive plaster in the same direction, and a few turns of a roller very gently, merely retentive—the object being to guard against the flap drooping, and, on the other hand, not to interrupt its vitalizing supply; the ligatures were brought out at the internal angle of the wound. The stump was then placed on pillows, but not much elevated, the object being that no additional difficulties should be added to the extensive flap getting its arterial support; the unforeseen event, the ligature of the popliteal depriving the part, to a certain extent, of that free anastomosis that was considerably estimated

and greatly relied upon for its maintenance. Immediately after, a full opiate was administered, and repeated at intervals during the day.

Everything went on most favourably up to the 5th, when I removed the dressings, the edges of the wound had united perfectly in many parts; at the extreme end of the flap that turned up into the angle on the thigh, it was dark for about a quarter of an inch, and evidently its life was gone; everywhere else the flap was steadied, and, for the most part, solidified in its position; I reapplied dressings, actuated by the principles just detailed, and ordered a moderate quantity of wine, nutritious diet, &c. Without any apparently assignable reason, on the 9th, a remarkable change was ushered in—great prostration and uneasiness referred to the chest, with a rapid small pulse; I at once raised up the patient, conceiving those symptoms might have arisen from pulmonary engorgement, occasioned by the somewhat doubled up position that the patient had lain in from the time of the operation. At a later period of the day utter prostration, and I feared pyemia was set in; on stripping the stump the extreme end of the flap was being separated by a deep ulcerated line, elsewhere the edges of the wound were coated with a yellowish, unhealthy deposit. The wound was dressed with lint steeped in turpentine, long strips of linen, wetted in warm water, were applied as adhesive straps to support the flap, the end of which refused union; this mode afforded a very efficient means. Over all was placed a thin linseed meal poultice, made with chloride of soda solution and water (one drachm to the ounce), over this a piece of oiled silk, the entire retained by rollers, and the part supported on a pillow—ordered six ounces of wine, a full turpentine enema to act on the confined bowels, and a draught with ten drops of turpentine, tincture of cardamoms, &c.; also placed patient on small doses of mercury—two grains of calomel and quarter of a grain of opium every third hour. 11 P.M.—Pain very much diminished; bowels well freed; wine and beef tea. February 10th—Much in same state; slight lurking pain in lower part of right chest; wound not much altered in character, and dressed as on yesterday; to continue the pills; blistered over the seat of pain; pulse so shabby, wine to be increased to 10 ounces through the day, and 6 for night. On the 11th no improvement; respiration more difficult, alæ nasi expanded during each effort; cannot make a full inspiration, pain so sharp; purulent smell from breath quite perceptible; lips livid; pulse so rapid as scarcely to be numbered; great prostration, lividity, and

sunken countenance; but little change in the wound; ordered turpentine draughts, and, to allay the constant cough of irritation, prussic acid and morphia—a large blister over the sternum—10 ounces of wine by day, and 6 at night—2 quarts of beef tea, and the calomel to be continued. On the 12th the report states:—She had some sleep; pulse not so rapid; respiration not so embarrassed; pain in chest less, but cannot take in a full inspiration, stopped by acute pain: however, on the whole, this symptom is better than on yesterday; purulent fœtor intolerable from the breath; no pain in the wound; stump dressed as before; the patient lies on her back still and quiet like a log, so little evidences of vitality about her; however she swallows all her nutriment—10 ounces of wine, eggs beaten up with spirits and warm milk, 2 quarts of beef tea, 8 ounces of wine for night; calomel and opium to be continued. 13th.—Her respiration somewhat improved; purulent expectoration in quantities, alæ nasi not now dilating, yet deep inspiration as yet perfectly impracticable. Has consumed all the nutriment and wine given to her, without the slightest sickness of stomach; the wound looks healthy; dressed as before; changed the patient to a fresh bed, propped her up with pillows, to relieve the congested lungs, for a couple of hours at a time; bowels well freed; calomel and opium continued, with a full opiate at night; ordered 16 ounces of wine, 2 quarts of beef tea, an egg with boiled milk, and 2 ounces of spirit twice in the day and night. 14th.—But little change; to continue everything; expectoration of purulent matter still abundant, and breath loaded with its fœtor. 15th.—There is a remarkable change in the pulse for the better, its beat is more determined, and not hurried in a current, yet still very rapid; the pain has left the right chest altogether, but still lurks beneath the sternum, and deep in the left lung; respiration still hurried and short; mercurial diarrhœa, so stopped the pills; placed 2 drachms of mercurial ointment in each arm-pit, and gave 40 drops of laudanum night and morning; to continue 16 ounces of wine, 4 ounces of spirit, eggs and beef tea as before.

The patient continued much in the same state, depressed and sunken, until the 21st, when there was a marked improvement—the pulse coming down several beats; the respiration more developed and not so rapid; the absence of pain; the changed aspect of the countenance from its leaden lifeless colour; the restored movements of the eyes from their settled stare. In conjunction with this altered constitutional manifestation, there was a corresponding local change: the

little deadened margin of the flap was entirely cast off, healthy granulations had sprung up to compensate for it. The ligatures were unusually delayed—not being cast off until the 22nd; the separation of the cord from the main artery I looked forward to, not without apprehension; however, the first few days of repose and quiet efficiently sealed the vessel. The patient gradually and steadily progressed until the 27th, when a large depôt of matter formed near the buttock. I had to cut very deep for it, and certainly not less than a pint of matter escaped. A few days later I had to open another near the crest of the ilium, when about eight ounces flowed off; the stump was entirely healed at this time, and the patient was confined to bed solely for the management of those extensive abscesses by the careful adjustment of pads and bandages; diminishing gradually the pressure from the circumference to the centre of each, and having the incision open for the escape of pus as fast as secreted, these became gradually obliterated. During the latter part of the management of this case, the large quantities of wine and spirits were, of course, dispensed with, but a very nutritious regimen was even still adhered to. At the end of March she was perfectly well; the stump was admirably formed; the long, transplanted flap lay well up in its berth behind, covering the ends of the bones in a most perfect way, without strain or tension; a few days later and the young woman was quite happy, moving about freely with a wooden leg.

It is unnecessary to go back upon or to recapitulate the several points of interest contained in this case—there are many in a practical way that cannot be surpassed; there is one, however, that I must, before concluding, specially allude to; I refer to the treatment of pyemia by the abundant exhibition of stimulants, and the free administration of mercury and opium. In several instances, some of which have been published in these reports, I have been fortunate enough, by this mode of treatment, to rescue the patient from the very jaws of death, and the present case adds another to the list. I do not think this is the place to canvass the various opinions of Pathologists as to the nature of the affection, and the theories in support of their views, but I do with confidence affirm, that the practical lesson—the aphorism which I have laid down—will not be found deficient in efficacy or unproductive of good.

ART. II.—*Observations on Epistaxis.* By RAWDON MACNAMARA, M.R.I.A., Professor of Materia Medica, R.C.S.I., and one of the Surgeons of the Meath Hospital, &c.

FEW lesions are popularly considered of graver import than hemorrhages, no matter what their seat; yet of all these, to none is less importance in general estimation attached than to that which makes its exit through the nostrils; and why this should be so, can only be explained on the two-fold ground of its extreme frequency and of ignorance. People so repeatedly witness a bleeding from the nose unattended with any evident serious consequence, the public generally are so much in the habit of attributing the same effect to the same cause, that it is not to be wondered at that so every-day an occurrence should give rise to but little alarm, and it is only when the loss of blood becomes serious as to its amount, and difficult in its being checked, that any importance is attached to what must, or at all events *should*, give rise to anxious consideration on the part of the reflecting physician. Numbers of people suffer from repeated attacks of epistaxis, of a more or less grave character, who never think of consulting a medical man on the subject; and it is only when an attack more obstinate than usual occurs that the surgeon is sent for, and but too frequently every resource of his art has to be put in force ere the hemorrhage be arrested, and the safety of his patient secured. Nor, in my mind, are we ourselves sufficiently free from censure in this respect. To many an attack of epistaxis is but an attack of epistaxis, to be combated by the one routine plan of treatment—its exciting cause is not investigated with sufficient care; our every energy is directed to arresting the flow of blood, without that due weighing of the exciting cause that the nature of the case so imperatively demands; and we hasten to apply our styptics, &c., to control that hemorrhage, which, after all, may prove to have been but a salutary effort of nature. Nor is this so much to be wondered at, when one for a moment reflects on the scene that but too frequently presents itself on the surgeon's arrival; basins *apparently* filled—cloths saturated with blood—anxious relatives and friends surrounding, and officiously but ineffectually tendering relief to the patient, scared at what, to the non-surgical eye, must appear a serious loss of blood. On the moment of his arrival the surgeon is besieged with entreaties to afford that relief without which dissolution appears imminent;

everything conspires to render hurried that decision which should be calm, and founded on a rational consideration of the nature of the case, based on a correct diagnosis of the cause of the hemorrhage; without which future serious injury to the patient may occur, and on the correct establishment of which, much more than the present apparently successful treatment of the case may depend; impressed with the importance of these considerations, therefore, is it that I venture to put on record the result of much observation and consideration of a lesion, that, in my mind, is of grave moment.

The first and most important consideration for us to entertain is, whether the popular opinion be correct, and whether that in every case, a bleeding from the nose is but a bleeding from the nose, to be looked on as having but the one source or origin, and to be treated but on the one plan. That such opinion is founded on very crude notions, far removed from our advanced stage of etiological and pathological knowledge, is but too evident to every one who merits the name of physician or surgeon; yet some advantage may accrue from a glance at these causes, and a retrospect of what has been written by the great fathers of our art; so that I shall not apologise for pressing their labours into my service, and subsequently adding thereto any trifling information in my power to place at the disposal of my professional brethren.

In limine, I may be permitted to observe, that every case of epistaxis may, in my opinion, be reduced under one or other of two great classes—the *Sthenic* or the *Asthenic*. No matter what be its cause, whether accidental, critical, or idiopathic, it must be answerable to one or other of these two great classes, and, as it belongs to one or other of them will its treatment vary, and be successful, or the reverse; and I cannot sufficiently express, in my opinion, the importance of the practitioner, called on to treat such a case, deciding, in his own mind, to which of these two classes the case in question may belong: to the patient will this decision be all important, and to the practitioner, in so far as his reputation is involved in the successful treatment of the case on scientific and sure grounds, is such correct solution of the question, if not on higher and more conscientious grounds, also of equal importance.

The exciting causes of epistaxis may be reduced under two great heads, viz.:—external and internal: amongst the former may be ranked all injuries or violence applied to the nostrils, or in their vicinity—such as blows or wounds of greater or lesser importance, from the slighter box, to that which is attended with fracture of the

nasal bones; the evulsion of polypi; caries of the bones of the nose; the introduction into the nasal cavities of irritant substances, and of foreign bodies, whether in the form of solids, fluids, or vapours; violent sneezing. Undue increase of temperature, whether solar or artificial, directed on the head, by predisposing to afflux of blood to the head, also gives rise to epistaxis; for instance, the direct action of the sun's rays on the uncovered head, or on it when protected with black coverings or metallic head pieces, is a not unfrequent source of epistaxis; the exposure of the head to rays of heat radiating from a fire, sitting in an ill-ventilated room, lighted from above by gas, favours cerebral congestion, frequently followed by epistaxis. Of all these external exciting causes of epistaxis, each of my readers must be able to furnish for himself many examples. I, myself, have seen a very obstinate bleeding from the nose produced in a young school-boy by the forcible introduction into the nostril of a piece of slate pencil; in another case, the incautious inhalation of the vapours of strong caustic water of ammonia was followed by a sudden and violent gush of blood from the nostril, most difficult to arrest; and in some cases I have, to my own satisfaction, been enabled to trace a frequently recurring epistaxis to the patient's habit of using Cork snuff; whilst every school-boy's experience furnishes him with many examples of "bloody noses," resulting from well planted blows on that organ.

It is with the *internal* causes of epistaxis, however, that the division into sthenic and asthenic is principally concerned, and these have well been classified by J. P. Frank, in his masterly treatise—*De Curandis Hominum Morbis*—into those which increase the flow of blood to the head, and those which impede its return from it. "*Quæ vel motum sanguinis ad caput augent, vel cruoris regressum præpediunt.*" Amongst the former of these may be ranked inflammatory diseases, erysipelas, small-pox, measles ("*pre-eminently*," writes Frank), catarrh, violent anger, protracted and severe headaches, cerebral congestion, dependent positions of the head, violent muscular exercises, severe vomiting, alcoholic excesses, protracted watchfulness; and, amongst the latter, mental emotions, accompanied either with profound terror, or excess of modesty, deep sighing, great anxiety, grief; as also shouting, speaking for a long time, excessive laughter, crying, singing, playing on wind instruments, great straining of any kind, fits of coughing, dyspnœa, cardiac, pulmonic, hepatic, splenic or renal disease, congestion of any of the abdominal viscera, over distention of the stomach or intestines

whether with food, flatus, or fœcal matters, ascites, the gravid uterus, pressure on any of the large veins by tumours of a scrofulous, malignant, or other type, intestinal worms, especially ascarides, convulsions, particularly of an epileptic character, cold, long continued and applied to the extremities, constrained positions of the body, ill-fitting garments producing irregular pressure, tight lacing, suppression of the menstrual secretion, or of an habitual hemorrhoidal discharge. Also such diseases as have a tendency to produce a spanemic condition of the blood; for instance, typhoid and adynamic fevers, scurvy, long exposure of the body to the influence of water, as in fishing, or protracted immersion, or long continued exposure to rain, resulting in that condition named by Huxham, *acute scorbutus*, in which, generally superadded to hemorrhage from other situations, we meet with epistaxis of a most formidable character, and most difficult to control. A state of blood somewhat similar is induced by the too long continued use of alkaline, as also (but in a minor degree, and from quite a different cause), of acid remedies. In Huxham's Essay on Fevers, we find a most interesting case, where hemorrhage from the mucous surfaces, dependent on this condition of the blood, ensued from long continued excessive doses of the sesquicarbonate of ammonia. This case is so instructive that I am tempted to quote it:—

"I had lately under my care a gentleman of fortune and family, who so habituated himself to the use of vast quantities of the *volatile salts*, that ladies commonly smell to, that at length he would eat them in a very astonishing manner, as other people eat *sugared carraway seeds*.—A Δριμυφαγεία with a vengeance!—The consequence soon was, that he brought on a hectic fever, vast hemorrhages from the intestines, nose, and gums, every one of his teeth dropped out, and he could eat nothing solid; he wasted vastly in his flesh, and his muscles became as soft and flabby as those of a new-born infant; and broke out all over his body in pustules, which itched most intolerably, so that he scratched himself continually, and tore his skin with his nails in a very shocking manner; his urine was always excessively high coloured, turbid, and very fœtid. He was at last, with great difficulty, persuaded to leave this pernicious custom, but he had so effectually ruined his constitution, that, though he rubbed on in a very miserable manner for several months, he died tabid, and in the highest degree of a *marasmus*;—and I am persuaded, he would have died much sooner, had he not constantly drank very freely of the most fine and generous wines,

and daily used large quantities of asses' milk, and antiscorbutic juices well acidulated with juice of Seville oranges, lemons, &c."

It may not be amiss to extract from my note book a few cases in which the epistaxis was due to one or other of these causes; and the first that I shall submit is that of M.B., a girl, aged 18 years, admitted December, 1861, into Meath Hospital, under Dr. Stokes' care, suffering under symmetric erysipelas of the face. I was consulted about this girl the evening before, and she presented high febrile symptoms, and stated that her complaint was ushered in with general bronchial symptoms, flushing of the face, rigors, headache, loss of appetite, and that, on the previous evening, she suffered from a smart attack of epistaxis, which, with difficulty, was controlled, and not until she had *lost a considerable quantity of blood from the nose*, a statement fully confirmed by the coagula that still plugged up the nares. I sent her into hospital that evening, and next morning the invasion of *erysipelas* was of a well-marked type. The further record of the case would be foreign to the object of this paper, but I may be permitted to observe, that the quantity of blood that she lost on this occasion was fully evidenced by her pulse, the character of which early called for the administration of wine.

The effect of *violent anger* in producing epistaxis is well exhibited in the following case:—Some years since I was summoned in all haste to attend a young gentleman in Leeson-street, under the following circumstances:—His father had found it necessary to remonstrate with him on some portion of his conduct that was displeasing to him, and, in the course of the altercation that ensued, struck him a few light blows—*light*, but, I believe, the *first* that this young gentleman had ever received; the effect produced was such as to alarm the whole family—his face flushed up, and became of a mahogany hue, his eyes became blood-shot, the veins in his neck and temples stood out as whipcord, he foamed at the mouth, became inarticulate with rage, and, in fact, assumed all the appearance of one about to have an apoplectic seizure; on my arrival I found him in this most alarming state, but before I could take any measures for his relief, a gush of blood took place from the nostrils, which, instead of checking, I need scarcely say I encouraged; and after a considerable quantity of blood was lost, he fell into a profound sleep, accompanied with much stertorous breathing, and, on my visit next morning, was as if nothing had ever happened.

I had recently under my care in the Meath Hospital, a most

remarkable case of epistaxis, resulting from *mental emotion;* for the particulars of which, as also for the great ability and zeal he displayed in the treatment of the case, I am indebted to my friend, Mr. Mulock, who at that time filled the responsible post of resident surgical pupil.

E. P., aged 26 years, admitted into Meath Hospital, 9th October, 1861; suffering from severe epistaxis. She had, earlier in the day, applied for relief, and Mr. Parr had suggested, what he has on repeated occasions found of great service in almost every variety of hemorrhage—ergot of rye, which, however, from her condition was contraindicated, she being four months advanced in pregnancy; she accordingly received a mixture of the solution of acetate of morphia, acetate of lead, tincture of digitalis, syrup and water; was ordered, on her return home, to remain quiet, and to keep wet cloths round her head; this plan of treatment had some temporary effect, but in a short time the hemorrhage returned with increased violence; the patient came back to the hospital, and Mr. Mulock plugged both anterior and posterior nares; in despite of which, however, the blood forced its way out several times in a most uncontrollable manner, and was only, for short periods, arrested by continued streams of cold water. Mr. Macnamara saw her in the morning, when the hemorrhage appeared to be checked, but recurred again several times during the day; the patient became much blanched, exhausted, greatly terrified, pulse dicrotous. In the evening Mr. Macnamara was sent for, and, by his advice, the plugs in the nares, both anterior and posterior, were withdrawn; the patient was made to insufflate a saturated solution of a powder composed of equal parts of tannic acid, sulphate of alum, and sulphate of zinc; the plugs, enlarged in size, were then re-introduced, the anterior ones steeped in a solution of muriated tincture of iron, and a large blister was applied to the nape of the neck. In despite of all this, the hemorrhage recurred on several occasions in consequence of the patient persisting in removing the anterior plugs, but was always much controlled by the use of the saturated solution described above, combined with the internal administration of the muriated tincture of iron in full doses. She slowly convalesced, with occasional returns of the hemorrhage, and at last, however, left the hospital on the 26th October; since which period she has had no relapse. In this case she attributed the attack of epistaxis to *profound grief* for the loss of her father, who had died some short time previously.

One of the most remarkable cases of epistaxis that I ever witnessed, was in the person of the late well-known Mr. R. B., to whose assistance, on several occasions, I was summoned for most severe hemorrhage from the nose; without a moment's notice a gush of blood, of the most profuse character, would take place from the nostrils, and more than once the quantity so lost would exceed a pint in amount; he was of a spare habit of body—anything but of an apoplectic appearance—never experienced any premonitory symptoms, and yet these attacks of epistaxis were persistent in character, and grave as to the amount of blood lost. If in attendance early after their occurrence, I was able to regulate, in a great measure, the quantity of blood so lost, but were any time allowed to elapse, the loss of blood was sure to be serious in quantity. The plan pursued was the diligent use of the saturated solution employed in P's. case; the application of a *well* exhausted cupping glass to the nape of the neck, and, subsequently, of blisters in the same region, coupled with the free administration of stimulants, wine, &c. Circumstances induced us to suspect that he had a heart of degenerate muscular structure, a suspicion that was subsequently verified by the *post mortem* examination of his body; his death occurred very suddenly, after about half an hour's suffering of intense dyspnœa, and the muscular structure of the heart was found much softened, friable, with a quantity of fat superimposed on it; and oil globules were easily, on pressure, afforded from its walls. In this case I have no hesitation in ascribing the epistaxis to the condition of the heart, nor is it the only case that I could adduce, were such, in my opinion, necessary.

The influence of splenic engorgement in producing epistaxis has long been admitted by all authors on the subject. I should, therefore, not introduce the following case, but that, independent of this complication and connexion, it deserves to be recorded.

Early in this year I was summoned to visit a young lady, apparently in the enjoyment of robust health; she complained of a deep-seated pain in the left side, and of a sense of swelling and enlargement in the region of the spleen. She stated that for some time she had, without any accountable reason, been subject to *slight epistaxis*; her general health had been good, but the pain in the side and the sense of swelling there, were most distressing. In every other respect her general health appeared to be unimpaired. The gentleman who had been in attendance previous to my arrival, had leeched and blistered her over the seat of her uneasiness, with,

however, but little benefit. A careful examination left no doubt on my mind that that side was considerably larger than the other, and the impression forced itself on my mind that it was some lesion of the spleen; at all events the disease, whatever it might be, was clearly situated in the abdominal, and not the thoracic cavity; still her general appearance contraindicated any strumous or malignant affection, and her history entirely put aside all possible connexion of the affection with ague; she had no symptoms to warrant such an assumption—had never lived in any fenny or marshy district; in fact, previous to the attack, having been for some time resident in the healthiest part of one of our most salubrious outlets—Rathmines. The treatment adopted, after some time seemed so much to improve her, that my visits were considered no longer necessary. On the very night of the day on which I left her, the old pain and sense of swelling returned, but in a ten-fold more aggravated form. Next night she had intense rigors; all next day and night a continuation of the pain and swelling, but, if possible, in a more intense form, and the following morning, after a night of sleepless agony, she felt sudden relief, following a sensation as if something burst internally whilst throwing herself about from side to side, in search of some relief from her agony, in change of posture; she fell asleep, and, after a few hours, awoke with a feeling of intense nausea, called for a basin, and threw up from the stomach very nearly a quart of healthy laudable pus, mixed with copious streaks and clots of blood; for some days after this, the sensation of nausea at intervals returned, and she recovered in about ten days, without one other bad symptom. In this case, the preceding epistaxis was evidently the result of splenic engorgement—an engorgement which subsequently degenerated into suppuration, and terminated, most fortunately, by adhesion to, ulceration through, and discharge of the contents of the abscess, by the stomach—a view of the case in which I was, at a later period, supported by the late Mr. Rynd, who kindly saw the case for me during a brief period of absence from town. Since then up to the present moment, a period of nearly eight months, this young lady has enjoyed uninterrupted good health; for about a month afterwards she occasionally complained, on any sudden or violent motion, of a sensation as if something was *tearing* in the old seat of pain, but even that symptom has now long since disappeared.

For the following most instructive case of epistaxis, dependent on renal disease, I am indebted to my friend, Dr. Kidd—I transcribe it in his own words:—

"MY DEAR MACNAMARA—The leading particulars of the case of epistaxis I referred to, are as follows:—A lady, a native of Tasmania, but latterly residing in Pembrokeshire, came under my care in July last, aged about 38, married 10 years, during which she had 16 miscarriages, but never passed the third or fourth month of pregnancy; she had been under treatment for uterine disease before I saw her. When I saw her the catamenia had ceased for some two or three months; she had been suffering much from constant vomiting and dyspeptic symptoms. She had a very anemic appearance; her lips were white and pallid. For six weeks she had had repeated attacks of epistaxis, for which she had been treated with gallic acid. On the least scratch or breach of the surface of the skin, she bled very freely; even rubbing with her nails caused the blood to flow so as to stain her dress to a great extent. In such a state of defibrination was the blood, that the slightest pressure caused an ecchymosis, and she was covered with black, yellow, or orange patches; the limbs were swollen and anasarcous. My first impression was, that the case was purpura hemorrhagica, but there were no purpuric spots. I then looked to the gums, but there was no appearance of scurvy; I next directed my attention to the kidneys, and here, I believe, discovered the cause of all her suffering. The secretion of urine was scanty, not more than oz. xii in 24 hours, sp. g. 1010; when boiled, one-eighth of the tube was filled with coagulated albumen. After this the anasarca increased and effusion took place into the cavity of the abdomen. The hemorrhagic tendency continued, and she had repeated attacks of epistaxis; the worst of these occurred on the 18th of Nov., induced, probably, by picking at her nose. This continued, more or less continuously, for 24 hours, resisting all the ordinary means of stopping it; when her anterior nares were plugged the blood ran down her throat; I thought I should be obliged to plug the posterior nares, but, before doing so, tried the following method, which proved very effectual:—I rolled cotton wool round a probe, and then saturated it with tincture of the muriate of iron, and with this mopped out the nose as far as I could reach, having failed with a speculum to find the bleeding point; I then plugged the anterior nares with cotton, wet with tincture of the muriate of iron, and made her sit on a low seat with a chair in front of her, with a cushion on the back of it, on which she rested her head; in this position the blood gravitated towards the anterior nares, and was there coagulated by the iron, and very soon stopped the bleeding.

"There was no pain or irritation produced by the iron, and no return of the bleeding since.

"Yours truly, G. H. Kidd."

But of all the varied causes of epistaxis that I have enumerated, the most insidious—that which but too frequently is most overlooked, and yet which is most potent in its influence—is scurvy. Each of my readers must have witnessed more than one case in his own practice illustrative of the truth of this assertion The following instance—occurring in the practice of one of the most gifted physicians, the most accurate observers, that has lived in the present century, J. P. Franks—is too valuable to be omitted on the present occasion; and, in my mind, its principal value lies in the fact of the cause of the epistaxis not having been recognised by so acute an observer for some time; it occurs in page 136 of the second part of the fifth volume of his great work—"*De Curandis Hominum Morbis.*"

"Of internal causes, there is scarcely any of greater potency in promoting a flow of blood from the nostrils than scurvy; occasionally, indeed, the scorbutic tendency is not evinced for some time by any other symptom than this very hemorrhage. For example, we had the charge, at our clinique, of a man from whose nostrils blood copiously gushing forth induced us anxiously to seek for the cause of this lesion. The gums of this man (a tolerably strong one), were neither spongy or bleeding, nor were there any maculæ on the skin, or any dyspnœa present. The spleen presented an enlarged and knotted appearance, as is usual in these countries; the arteries, fuller and frequent, struck the finger with a singular harshness; the patient was hot, and presented the fallacious appearance of inflammatory fever. Seduced by these appearances, we opened a vein, and drew a pint of blood, which, after a time, was densely buffed. At night a profuse discharge of blood again burst forth from the nostrils, yet in the morning we found the pulse harder and fuller than yesterday, and increased symptoms of fever. The venesection was repeated, and the blood was almost more deeply buffed than before; about 10 hours afterwards the blood gushed forth with such violence that it could scarcely be restrained by surgical means, six pints having been lost in a very short space of time. On the following day we found the fulness and hardness of the pulse, or the fever, by no means diminished by this, but the entire surface of the body in every direction covered with scorbutic maculæ. The debilitating plan of treatment on this account being abandoned, we instantly

had recourse to a generous wine, with lemon juice and sugar, and under the use of tonics and of a nourishing diet, in a short space of time had our patient convalescent. A few months afterwards we had another example, similar to this, in a young man with an emaciated and pallid frame from whose nostrils blood would frequently gush forth, but principally when attending our clinique. He also, as in the last case, presented to our notice a full, frequent, and vibrating pulse; venesection produced for us blood that quickly became buffed, but it was not able to prevent the return of the hemorrhage. After a time, on account of the increase of the fever, and of the hardness and frequency of the pulse, we had recourse to another bleeding, which was attended with a similar appearance of the blood; but it was in vain that thus we tried to cure the disease. Hence, although the maculæ were not present, still aware of this scorbutic diathesis, and remembering the former case, we ordered bark, with better diet, and an allowance of good wine, and cured our patient under the rapid influence of this more judicious plan of treatment."

In extracting these cases from the works of J. P. Franks, I consider that but little apology is due to my readers; at the present day the value of the writings of this truly remarkable man is but very insufficiently recognised—a fact principally, in my opinion, due to the non-existence (so far as I am aware), of any edition of his works in English. The new Sydenham Society would undertake a task most acceptable to our profession were they to produce for us a good English version of the masterly treatise from which I have translated the foregoing cases.

The influence of disturbed cerebral circulation is but too generally recognised to require here the record of any cases to establish its existence. The following case, however, (of which I only give a sketch), is, in many particulars, so interesting, not alone on account of this connexion, but also as showing the relief that may follow the depletion so produced, that I am induced to repeat it here.

Early in last year I was asked to see a young lady, aged about 15 years, under the following circumstances:—She had been for some time under the care of my distinguished friend, Dr. Wilde, for conjunctivitis of an exaggerated character; gradually, however, the following additional symptoms presented themselves—intense pain in the head, much aggravated by the recumbent position—constant moaning, persistent even during sleep; in this stage of her illness an hyperæsthetic state of the skin, so much so, that no

matter how gently she was touched, it would arouse her from apparently the profoundest slumber; but the most remarkable feature in the case, and that for which I was consulted, was the suddenness with which she would fall into a state of profound sleep. Sitting in her chair, in the midst of a conversation apparently of the highest interest for her, in the middle of a sentence, her chin would drop forward on the sternum, and she was in a profound slumber—so profound that the loudest *noise* could not disturb her, but, the *slightest touch*, and she would start up as wide awake as if she never had been asleep; the same phenomenon would occur at her meals, in the midst of the process of mastication, with the morsel still in her mouth, suddenly would she drop off asleep, and many was the time that her relatives dreaded lest she would thus be choked; coming down stairs she would lean up against the wall and be off to sleep. The catamenial period had presented itself a few months previously, and, in this respect, everything was normal. But perhaps the most painful scene was to witness her at the piano (she was highly educated, and for her years an accomplished musician); on more than one occasion her aunt would ask her to play for me some piece or other of music. The first few pages would be played with great spirit and accuracy, but when she came to the last page or so, one could easily recognise the struggle with which the performance was carried on, and the last few bars were painful beyond description, for the slow laboured effort with which she concluded the piece—then a deep sigh, and then she was once again fast asleep. This state of affairs continued for some time, becoming each day, if possible, worse, and the pain in the head became so intolerable when she assumed the recumbent position, that at last she resolutely declined going to bed at all, and for many weeks passed her nights in the erect position in an arm chair; thus she expressed herself as being free from pain. An ingenious experiment was devised by her father to see whether this pain might not be hysterical; she was allowed to go asleep in the erect position, and then gently dropped into the recumbent one; after a moment or two deep moans evinced that even in her sleep this position gave rise to the intolerable pain in the head, and after a few further moments of intense suffering, she would completely awake, and at once assume the erect position, with very great comparative relief. For the purposes of this paper it would be idle to mention the many phases, complications, and various plans of treatment adopted in this case; suffice it to say, that her convalescence may be dated

from a rather sharp attack of epistaxis, and this occuring after repeated applications of leeches in different directions about the head, by which means depletion had been carried on as far as we judged that it could be done with prudence.

For many years it has been discussed (with more zeal than corresponding amount of benefit in the treatment of the disease), whether the blood in epistaxis be furnished by the veins, arteries, or capillaries. Franks, in the treatise to which I have already alluded, states, that it is difficult to decide whether it be from the veins or arteries that this blood be poured forth; but that he has himself frequently witnessed, in this situation, a varicose condition of the veins. "Num venæ, num vero arteriæ hunc fundant, hoc arduum est dicere. In chronico profluvio varicosum sæpe indolem venarum subesse novimus; in eo, quod hypersthenicum est, arterias nunc læsas, nunc finibus quibus rorem in nares exhalant, dilatatas suspicamur." Now, when so competent an authority states that he has himself *witnessed* anything, we are bound to accept it as a fact; but to the "suspicamur" we may be permitted to place on record our expression of dissent—the vessels that supply the nose are entirely of too small a calibre to account for the profuse hemorrhage that we occasionally, nay frequently, witness in this situation; and for many years past, I have been at a loss, satisfactorily to account for the phenomenon, until, in a conversation that I had on the subject with my valued friend Dr. Ledwich, he mentioned to me what seems to be the true anatomical reason, for which, he himself was indebted to some German authority, whose name, however, he now forgets. This gentleman drew attention to the existence in the turbinated bones of channels or depressions, with which, of course, every practical anatomist had long been familiar. Across these is stretched the mucous membrane lining the nostril, converting those channels into complete canals or sinuses. In these the venous blood exists always in a state of *stasis*, for the purpose of allowing the transudation of that fluid which should always lubricate the Schneiderian membrane. When, from any cause, a number of these are ruptured, of course, we have a profuse hemorrhagic discharge; and their very anatomical configuration is sufficient to explain why, in many cases it is so difficult to check the bleeding; whilst if the hemorrhage depends on an anemic or spanemic state of the constitution, this condition of affairs is most favourable to the continued and persistent drain of blood from the system. Believing, as I do, that this is the true explanation of the source from whence the

blood is furnished, I must beg of my readers to carry it with them in their minds, as, in explaining the efficacy of some of the plans suggested for treating epistaxis, we shall have occasion to revert to this anatomical arrangement.

As to the premonitory symptoms that usher in an attack of epistaxis, they may be divided into remote and immediate. The remote ones having for their seat the position, in the body, of the viscus in which the cause originates—the immediate ones in the majority of cases being trifling, and so insufficiently marked, as not to arrest the attention of the patient until the hemorrhage set in. The former of these would open up so wide a field, that I must content myself with simply reminding my readers of the variety of causes on which the epistaxis may depend; and in cases where the epistaxis is of repeated occurrence, attention to the symptoms generally associated with each of such diseases will be sufficient to warn us of the impending danger. The immediate symptoms are, as I have already stated, of so vague a character as but too frequently to escape altogether the patient's attention; perhaps of all, the most frequently present is a sensation of titilation and itching of the nares; in many we meet with a feeling of fulness of the head, frontal weight—varying from a feeling of uneasiness to positive vertigo, *tinnitus aurium*—sense of fulness and constriction in the large veins of the neck, spots before the eyes, flashes of light; in some extreme cases, a sense of fulness and positive pain in the neighbourhood of the vertebral vessels; the patient sometimes is heavy and somnolent, at others fidgety and restless; but in the great majority of cases, the first intimation the patient has, is the escape of blood from the nostril, varying in quantity from the flow *guttatim*, to that *pleno rivo;* this, in the majority of cases, comes but from *one* nostril, occasionally, but far more rarely, from both; but, even in this case, we will remark that the flow is far more profuse from one than the other nostril. It has long been a favourite theory, that the blood escapes from that nostril which corresponds to the side in which is seated the *cause* of the hemorrhage—for instance, if it be from congestion of the right lung, the blood flows from the right nostril, and *vice versa;* if it be in the liver that the disease lies, the blood will escape from the right nostril, but from the left, if it be in the spleen, and so on; now, though my experience will not lead me to vouch for this statement as being a law of universal application, still, I am inclined, to some extent, to vouch for its truth. As far as my memory serves me

now, in most of the cases of typhoid fever in which I have witnessed this phenomenon, the blood has escaped from the left nostril; and here we have sound reasons for believing the spleen to be the viscus, on the engorgement of which the epistaxis depends; whilst in one case at least of hepatic disease, in which I witnessed repeated hemorrhage from the nose, it invariably came from the right nostril. Whether this, however, be a coincidence or a law, can only be decided by repeated, accurate, and extensive observation; it may be remarked, however, that Franks inclines to the adoption of this theory.

Perhaps one of the most important questions a medical man can be requested to decide, is that involved in a correct prognosis of the case which he is called upon to treat; second, and second only, to his accurate diagnosis and judicious treatment of the case in question. Fortunately for us, and occasionally more fortunately still for the patients and their friends themselves (for "where ignorance is bliss, 'tis folly to be wise"), we are not so frequently in this, as in other lesions, pressed for our prognosis. As I have already stated, people are in the habit of looking on epistaxis as so common, ordinary, every-day an occurrence, that they rarely look beyond the present, and so as the hemorrhage be checked, give themselves no further trouble about the serious questions that may be involved in the correct interpretation of the state of constitution giving rise to this, but too frequently, most serious and significant affection. If the surgeon, however, has but traced the symptom to its origin, he will experience but slight difficulty in coming to as accurate a conclusion on the point as our finite judgment will admit of. In general terms, I may express it as my opinion, that the gravity of the case, cæteris paribus, increases with the years of the patient. In childhood and in early youth we frequently meet with cases of epistaxis of but slight importance, transitory in their nature, and, most probably, caused by abdominal congestion, dependent on some error of diet or other passing cause; not so, however, in the more advanced periods of our life; every such case demands at our hands most careful investigation, and just consideration of each and every cause that may give rise to it. Should we be so fortunate as to arrive at a correct solution of this problem, we may find ourselves in a position to be, if not of substantial service to the patient entrusted to our care, at all events, of being able to give an accurate prognosis of the course that the case is likely to pursue. When the epistaxis occurs in any of our continued fevers, it may, as in

typhoid fever, be looked on only as a normal occurrence or symptom to be expected in the natural course of events; or it may be of most serious, if not fatal, import, as in the advanced periods of typhus, scarlatina, measles, small-pox—in these cases evidencing a deteriorated condition of the blood itself, the more serious the later it occurs in the progress of the disease. In acute scorbutus, and in that condition of the blood met with in patients who have been subjected to protracted immersion in water, epistaxis, though rarely a solitary hemorrhagic symptom, is a most serious one—most intractable in its character, and of the gravest importance. When it owes its origin to disturbed cerebral circulation—when it is, in fact, accompanied with other evidences of determination of blood to the head—the prognosis must be grave, especially if the patient will not submit to the plan of treatment sure to be suggested by the judicious physician; here not only is it a warning kindly given us by nature itself of the impending danger, but it acts as one of the safety valves by which the danger may be warded off. When accompanied with other symptoms of the existence of the so-called fatty heart, our prognosis must be grave, and so on, the prognosis in each case depending on, and to be measured by, the importance of the primary lesion to which the epistaxis owes its origin.

When the surgeon is summoned to such a case, the prominent idea in the mind of each non-medical bystander is—"how he will stop the hemorrhage;" the first question, however, that the real master of his art should decide is—*whether he should take steps to stop it all or not;* a question only to be correctly answered by taking into account the true cause on which the epistaxis may be dependent. In general terms it may be laid down that, if the epistaxis be of a sthenic type, it should not be arrested, but, on the contrary, be encouraged, always so long as it be kept within due bounds. So long as the pulse preserves its force and rythm, the eye its lustre, the cheek its colour, the extremities their temperature, the heart its normal impetus and force, no serious danger can, but, on the contrary, good will, accrue from the loss of blood; should it, however, exceed these limits—should symptoms of faintness and flagging circulation evince themselves, then, *but not till then*, is the surgeon called on to interfere. In epistaxis of the asthenic type, however, we cannot lay down so general a rule; occasionally it may, even in these cases, be of benefit, but far more frequently is it likely to prove prejudicial; certain it is, that in this condition of affairs in no case would it be justifiable to allow the hemorrhage to proceed to

anything like so great an extent as in the preceding. Indeed, in these cases, perhaps the safest rule—when we take into consideration the time that may have been spent in procuring the attendance of the surgeon, the quantity of blood that, in all probability, will have been lost ere his arrival—will be to exert ourselves to arrest the flow as speedily as possible. Nor can this, in the majority of cases, be easily effected; indeed, in the more serious cases, it is but too frequently entirely impracticable; and, even if successful in our exertions in this direction, it is only but to see them baffled by an escape of blood through some other channel. In such cases our every exertion should be directed to the employment of such means *as will effect a radical change in the character of the blood itself*, superadded to those that we may either locally or generally use for the purpose of restraining its flow. What those should be, the special nature of each case will indicate, and without their exhibition other treatment of the case will be futile.

When we reflect on the means employed by nature, unassisted by art, for arresting hemorrhage, and which may be concisely summed up in four words—contraction, retraction, coagulation, syncope: contraction of the open mouth of the bleeding vessel, retraction of the vessel itself within its sheath, the plugging up of the open mouth of the vessel with coagulated blood, or the much diminished impetus of the circulation due to the enfeebled action of the heart caused by syncope—when we reflect, I say, on these means, and if we accept the theory that I have already placed before my readers of the source from whence the blood flows, it will be evident that the first two—contraction and retraction—are, for anatomical reasons, unlikely to be of much use in checking the flow of the blood; and that, when nature plays the part of surgeon, it is by one or other, or both combined, of the two latter plans she effects the cure. And, in fact, every day experience establishes for us the truth of that which theory would suggest—the spontaneous arrest of the hemorrhage, whenever of a serious nature, being almost invariably attributable to the mechanical pressure of a coagulum—a fact which tends much to confirm me in the opinion that what has been already put forward is the true solution of the *questio vexata*, the source from whence the blood springs in epistaxis. And it is most important that these clots should not be disturbed; in this case the *nimia diligentia* of the surgeon is sure to do mischief and cause a return of the hemorrhage, if it lead him, before some days, to disturb the plug placed by nature in the very position best suited for controlling the bleeding,

and made by her of the material least likely to injuriously affect the patient.

Once decided on interfering with the hemorrhage, it behoves the surgeon to consider the means which his art has placed at his disposal for that purpose; these we will find may be classified under two heads—general and local—terms which explain themselves, and which we shall proceed to discuss in the order in which they are written. To the class of general remedies belong all those medicines recognised as astringents; each one of them in its turn has had its advocate; and after all, perhaps, but little difference, if they be possessed of an equal amount of astringency, exists in their respective merits; thus we may administer internally galls, tannic and gallic acids, catechu, kino, oak bark, logwood, matico, the mineral acids, alum, the more astringent of the preparations of iron; or we may administer sedatives, such as opium and digitalis, or medicines that combine both a sedative and astringent property, such as the acetate of lead; or we may depend on purgatives, or the astringent vegetable tonics; or that class which act on the blood, checking the scorbutic tendency, such as fresh vegetables, the vegetable acids, and pre-eminently of these lemon juice; or we may prescribe a medicine first suggested by Spajrani, and favourably reported on by Négrier, Pignacea, and others—the ergot of rye; or we may order turpentine, or the chlorate of potash, or camphor combined with opium, and many others, the use of which has been signalized from time to time, but the value of which has not had the stamp of experience.

Now, to the most superficial mind, it must be evident that we cannot prescribe these remedies indiscriminately in every case of epistaxis. Why one should be preferred to another must depend on the cause of the hemorrhage; if it be sthenic in its type we administer such medicines as will produce a decided impression on the system, *whilst at the same time we encourage the flow of blood;* perhaps in such a case as this no combination will be found more useful than salines with digitalis, as in this formula:—

℞ Infusion of roses, to eight ounces; sulphate of magnesia, two ounces; tincture of digitalis, two drachms; dilute sulphuric acid, two drachms; of which two table spoonfuls should be taken every second hour till the effect be produced.

Repeatedly have I seen marked benefit from such a combination; nor, on the cessation of the epistaxis, is the treatment to end here. The treatment still must be continued, directed in such a manner as to correct the constitutional state that gives rise to the hemorrhage,

and the diet and habits of life of our patient must come in for their full share of attention at the hands of the practitioner.

In such cases as these it is that the abstraction of blood, either by leeches, cupping, or venesection, has been advocated. I can fully recognise the value of this practice if it be directed against the *state* of constitution giving rise to the epistaxis, and if the flow of blood itself be not sufficient to produce the desired impression on the system; but, if it be sufficient, this line of practice is most injudicious. We can procure the required amount of blood by encouraging the epistaxis; why then have recourse to other means for its abstraction? And if the hemorrhage has already exceeded due bounds, why increase the mischief by taking more blood away? If the epistaxis be salutary, but not sufficient in quantity, then we may deplete, but we deplete not to arrest the hemorrhage, but because it is not already sufficient, and, in that case, our depletion is directed, not against the epistaxis, but against the disease that gave rise to the epistaxis. When conducted on such principles the abstraction of blood is based on sound theory; but to talk of venesection, leeching, or cupping, as amongst the remedies for epistaxis, as such, is, in my opinion, most erroneous. The cupping to which I now allude is, however, not to be confounded with *dry* cupping—a most useful remedy, but applicable to quite a different condition of affairs to that which we are now considering.

Presuming, however, that the case be one calling for prompt suppression of the hemorrhage, on which of these *constitutional* remedies are we to rely? The answer to this question is—that this will entirely depend on the state of constitution present in the subject of the epistaxis. If it be a simple case of passive epistaxis, occurring in a delicate patient, and owning, for its proximate cause, some trifling congestion, due perhaps to position, such as reading for a long time with the head bent forward, &c., &c., we cannot do better than at once have recourse to five or six grain doses of fresh prepared powder of ergot of rye, repeated according to the emergency of the case, every 10 or 15 minutes. The first person who drew the notice of his professional brethren to this interesting property of the secale cornutum, was Dr. Spajrani, in a communication published by him in *Omodei's Annali Universali di Medicina e Chirurgia.* In addition to cases of hemorrhage from other situations in which he found it of service, he recorded two cases of epistaxis in which its exhibition was attended with the happiest results, and since that period (1830), it has been tried by many

other practitioners, with varying success; its most zealous advocate, however, is my old valued friend, Mr. J. J. Parr, in whose name the old students of the institution will recognise the efficient and experienced resident medical officer of the Meath Hospital; he informs me that a long and frequently repeated experience of it justifies him in considering it a remedy of sovereign utility, not only in this, but in many other forms of hemorrhage. In this class of cases I have found a mixture containing the acetate of lead in combination with the acetate of morphia and distilled vinegar also of great service; and, after we have checked the flow of blood, we will find the preparations of cinchona in combination with the dilute phosphoric acid, or of quinine in the form of pill, combined with camphor and the extract of henbane or of hops, of great value in correcting the peculiar cachectic state that predisposes to a return of the hemorrhage.

In that form of passive epistaxis connected with the anemic condition, I have found few remedies of greater service than the tincture of the sesquichloride of iron, in tolerably full doses. I generally prescribe it in combination with some of the pure vegetable bitters, such as quassia or columba, in from 15 to 20 drop doses every three hours; and indeed, in my opinion, the treatment of the majority of cases of asthenic epistaxis will not be properly concluded without the subsequent exhibition, for some time, of somewhat smaller doses of this most valuable medicine. It corrects the cachectic condition which predisposes to the return of the epistaxis; when present it controls it most sensibly, and in every particular materially improves the general health of our patient.

In that form of epistaxis which, contemporaneously with hemorrhages in other situations, appears in purpura, in those whose blood has undergone some serious depravation in the advanced stages of what are known as blood diseases, or by long exposure to wet, I believe that I am but expressing the unanimous opinion of the profession in giving the palm to turpentine, either alone in capsules, or in the form of emulsion, or combined with brandy or whiskey, in the form of punch. If in these cases medicine is to be of any use we must place our reliance on turpentine. The punch to which I allude is made by adding from half to a full wine glass full of spirits of turpentine to a tumbler of brandy or whiskey punch, and administering it, in severe cases, to the patient in as short a space of time as he can swallow it. The extraordinary results that ensue in apparently hopeless cases from the exhibition of this horrid dose require to be witnessed before they can be believed.

The external and local means relied on for arresting epistaxis are as varied as they are numerous—proceeding from the simplest of popular remedies, such as dashing cold water on the nares, back of the neck, pubes, &c., up to one, occasionally, of the most troublesome operations in surgery—plugging the posterior nares. We shall consider them in the order in which they have been mentioned.

The dashing of cold water on the back of the neck, on the top of the head, on the os frontis, the nares, and the pubes, is, in many cases, of signal service; yet it does not always act exactly in the same way. When applied in the immediate vicinity of the hemorrhage it acts by repelling the blood from the part, and so allowing time for the formation of a clot or coagulum, by which the bleeding point is plugged up. When applied at a distance from the part, such as over the pubes, the first action is to repel the blood *from*, the second to determine it *to* the part, the result of which is remotely to affect the circulation at the bleeding point, and by the temporary respite so afforded to allow of the formation of the coagulum. It is in this way also that the popular remedies—the key of the hall-door, or the cold smoothing iron, applied to the back of the neck—act, first by repulsion from, and then by derivation of blood to a part remote from the position of the lesion. I shall presently have occasion to point out that, in some of our more strictly surgical efforts, we have copied those homely popular remedies, and that with signal advantage to our patients. A remedy which latterly has become so popular that it may be ranked amongst those of popular origin, owes its first suggestion to M. Négrier. I allude to the elevation of the arm, of the side affected with the epistaxis, over the head, and its retention in that position for some time. M. Négrier speaks in high terms of the success attending this practice; and explains it on the theory that the heart has but a given amount of propulsive power, which is exhausted in propelling the blood up along the arm against gravity, and thus the bleeding vessel is deprived of it to a certain extent, and the hemorrhage thereby checked. Mr. Journez, a Belgian army surgeon, records some eight and twenty cases, occurring in troops marching under a hot sun, in his charge, when this plan of treatment alone was found effectual. M. Jamain, in a paper which he published on the subject in the *Gazette des Hôpitaux*, whilst he accepts the fact, refuses to accept the explanation, which he attributes rather to the erect position so enforced of the head, in exact contradistinction to that usually adopted by patients suffering under an attack of epistaxis, who, leaning over a basin, so

congest the veins of the neck, retard the return of the blood through them, and thereby favour, by the continuance of the hemorrhage, the expulsion of the clot, in this instance, abortively formed for the sealing up of the bleeding point. And if my readers will now refer back to the pathological views that, in a former part of this paper, have already been put forward, they will see that there are much grounds for M. Jamain's explanation of the successful results of this plan of treatment. In the erect position of the head the ethmoidal sinuses being brought into the horizontal position, that most favourable for the spontaneous formation of a coagulum; whilst with the head bent forwards they are in the vertical position, that most favourable for the persistence of the epistaxis, and this, independent of the congested state of the jugular veins, so induced a state of congestion that, no doubt, also tends to keep up the continued flow of blood from the nostril. That the erect position of the head has much to do with the arrest of the epistaxis, experience has long since taught me; I having seen many sharp attacks of congestive epistaxis arrested by the patient leaving the heated atmosphere where it occurred, going out to stand at the hall-door, or some other cool place, with his head held erect, and a handkerchief kept to the nose to prevent the blood soiling the dress; in those instances the position of the head being alone attended to without having recourse to the elevation above it of the arm.

Founded on the same principles of derivation as the dashing of cold water, is the application, in various situations, of the dry cupping glass, of blisters, and of the actual cautery. These, wherever applied, have many advantages; but, in my experience, are attended with the happiest effects when applied to the back of the neck, over the ligamentum nuchæ. Of the two former of these I have had repeated experience; of the latter I have none, so I shall no further allude to it than to state its employment was recommended by Zacutus Lusitanus, who directs it to be applied to the extremities; and that since his time the actual cautery has been applied to the nape of the neck, in some obstinate cases of epistaxis, as stated, with marked benefit. Of the two former plans, however, having frequently had recourse to them with signal advantage, I should wish to speak at some length. And first, then, of the dry cupping glass:—This, if properly applied, is a powerful derivative, but, if improperly, its employment is worse than useless, as occupying, in ineffectual efforts, time that might be far better bestowed in the application of other means for restraining the flow of blood. The way in which

the glass should be employed is as follows:—adapt the size of the glass to that of the nape of your patient's neck, the object being to employ as large a glass as the situation will admit of, and thus to increase the derivative action; but if it be the slightest shade too large it never can be exhausted effectually, and consequently will fail in producing the desired effect. Having, then, selected your glass, plunge it into a basin of boiling hot water, then dry it rapidly with a towel, smear the upper portion of the inside of the glass with spirits of wine—this you do by lightly rubbing it with your fusee dipped in the spirits of wine—now light your fusee, introduce it into the glass, and withdraw it rapidly yet quietly, and apply the glass at once to the desired spot. If these directions be accurately followed, the glass will be effectually exhausted, the exhaustion increasing as the temperature of the previously warmed glass falls; and an ecchymosis will be the result, the marks of which will not disappear for some three or four days. In applying the glass in this way, you must take care only to *moisten* the inside of the glass with the spirits of wine, not to have any of it present in the fluid state, as in this latter case, on introducing the lighted fusee, you set the spirit on fire, and on inverting the glass over the seat to which it is to be applied, you bring the blazing spirit in contact with the skin, and give rise to considerable pain, and, it may be, to a very severe burn. You should also observe a similar amount of precaution in dipping the fusee into the spirits of wine, as, if it be too heavily charged, drops of burning spirit may fall on your patient and produce similar results; when, however, ordinary precautions are observed, this is by far the most effectual way of performing, what is technically called, *dry cupping*, and the operator must indeed be a clumsy one, if, after one or two trials, he prove not as expert as the most experienced professional cupper. This plan of treating passive epistaxis, as old as the time of Galen, by whom it was employed, merits more repeated employment than now-a-days it gains. I am cognizant of its value, and recommend it strongly to the consideration of my professional brethren.

Analogous to this plan of derivation, but slower in their action, is the application of counter-irritants in various situations; for instance, the warm foot bath with mustard in it, as recommended by Chrestien; the application to the extremities of nettles, as advised by the celebrated Borelli, or of blisters to the nape of the neck, as first suggested by Niemann. Of this latter I can speak in terms of the greatest confidence, for some years past having been in the habit of

using them with signal advantage; in which line of practice I was happy to ascertain—in the course of a conversation that I had with him on the subject some short time back—that I am borne out by so able a surgeon as Mr. Fleming, one of the surgeons to the Richmond Hospital; he tells me that his experience fully corroborates mine, and that he has never failed in deriving signal advantage in the treatment of cases of epistaxis from the application of blisters to the nape of the neck; these, to be of use, must be properly made, about two inches wide, four to five inches long, applied along the cervical vertebræ, commencing as close to the occiput as the hair will admit of, and should be kept on at least eight hours.

In some rare cases, where the urgency of the symptoms induced me to think that a more rapid method of vesication would be desirable, I have had recourse to what may be termed instantaneous blistering, by the agency of the strong water of ammonia. The method of applying this is as follows:—A doubled piece of lint is to be folded to the desired size; this is to be placed in a saucer, and some caustic water of ammonia is to be poured on it; when saturated with it, it is to be raised with a dressing forceps, and applied to the nape of the neck. Some dry folded lint, of a larger size, superimposed on it, and the entire covered with oiled silk; this is to be left there for a few minutes, and on its removal, care is to be taken that the skin be not torn away with it; the result is a blistered surface of the full size and shape of the piece of lint employed. In this way we have produced, in a few minutes, the effect that eight hours' application of the ordinary blister may, after all, fail in producing. The great objection to it is the amount of pain produced by its application. In some cases, however, this is a consideration that may be only of secondary importance.

Of the general remedies these are the most important, and certainly those upon which most dependence is to be placed, but on them alone we cannot rely; those remedies which are applied locally demand some consideration at our hands, and they may be arranged into those of a styptic or astringent character, and such as act more or less mechanically in controlling the flow of blood. In the former class we find every remedy that ever was supposed to be possessed of astringent properties, from those of humblest pretensions to those that undoubtedly are of acknowledged efficacy. It would but little serve my purpose now to enumerate all that at various times have gained ephemeral reputation; I shall only introduce those that I can recommend with confidence to my

readers' consideration, leaving their selection hereafter to be guided by the circumstances of the case. That which I have found to be of most unvarying value is a powder composed of equal parts of tannic acid, sulphate of alum, and sulphate of zinc. These are separately to be reduced to fine powder, and then mixed as intimately as possible. Of this compound I add about a tea spoonful to a pint of water, and direct the patient to take up in the hollow of his hand what will be contained in it, and to snuff it up into the bleeding nostril, if the blood be issuing but from one nostril, the other being compressed, or into both nostrils, if the blood be issuing from the two. This is to be repeated several times, and during each interval *the head is to be held up erect*, a cloth being provided to catch the blood, and so prevent its soiling the dress. The water will by no means dissolve the amount of the powder here directed, but will *suspend* it, and, if used immediately after rapid gyration, it will fulfil every indication. Many other astringent remedies have been suggested; for instance, any one of these substances separately employed, or acetate of zinc, sulphate of copper, sulphate of iron, pernitrate of iron, perchloride of iron, the double salts of sulphate of iron and alum (as suggested by Sir James Murray), the various vegetable astringents in infusion or decoction, such as logwood, oak bark, matico, nut-galls, &c., or combinations of them with the metallic salts, to suit each several practitioner's taste; but, after sufficient practical experience of each of these, I have found none to excel or even to equal the combination I have previously described.

Some practitioners laud highly Ruspini's styptic, whilst others vaunt Pagliari's hemostatic. Not having ever had occasion to resort to either, I cannot speak of their value from personal experience; the latter of these, from its composition, I suspect to be an energetic styptic; it can easily be prepared as follows:—Boil together eight ounces of tincture of benzoin, one pound of alum, and ten pounds of water, during six hours, in a glazed vessel, replacing the water lost by evaporation with additional hot water, and keep the mixture constantly stirred, then filter; French cotton steeped in this solution should be introduced as far back into the nostrils as possible. Its property of coagulating blood is very remarkable, and warrants our employment of it in extreme cases.

In spite of our best directed exertions, we occasionally meet with cases that will require still further efforts at our hands. I advisedly say "occasionally," for I am of opinion that these cases are but few and far between. If the means already suggested be but diligently

employed the case must be an obstinate one that resists. However, such we occasionally meet, and our consideration must now be directed to the other means at our disposal. These are all, more or less, modifications of *direct pressure*, from the spider's web to the plugging of the posterior nares. Each, one and all, owe their efficacy to mechanical interference with the escape of the blood. Having mentioned it, I may here briefly state that spider's web moistened with vinegar was suggested by Chesnau as a valuable remedy for epistaxis. Later writers have insisted on the existence in the web of hemostatic powers; but I believe that any property of this kind that it possesses is purely mechanical, entangling in its meshes the blood, and thus facilitating its coagulation, whereby a plug is formed to seal up the bleeding point; of course, the vinegar, by its astringency, co-operates in checking the epistaxis.

Plugs of various kinds have been at different times suggested by successive writers, Avicenna, for instance, recommending the anterior nares to be filled up with plugs of dough, or of a paste made with chalk. Morgagni suggests plugs of charpie, moistened with spirits of wine, to be used in a similar manner. Audoin advises strips of carded lint to be pushed as far back as the posterior nares, and the bleeding nostril in this manner to be completely stopped up.

Somewhat analogous to this plan of Audoin is that which Mr. Smyly, the experienced senior surgeon to the Meath Hospital, is in the habit of employing. He having been kind enough to describe it for me, and given me permission to make his communication public, I shall gladly give it in his own words:—

"My dear Macnamara—I have found the following an effectual means of arresting the bleeding in cases of epistaxis; it is easy of accomplishment, and one to which the patient will readily submit.

"The plugging of the posterior nares presents difficulties which deter some practitioners from attempting the operation. It is attended with great annoyance to the patient, not only at the time of its performance, but during the few days the plug has to remain; its removal also is sometimes found to be a troublesome task. No doubt patients will submit even to this to be relieved from impending danger.

"I shall not easily forget a case I was called to see seven miles from town. I arrived in the middle of the night, and found an elderly gentleman lying like a statue, being not allowed to move hand or foot, the windows were wide open, the patient was shivering

with cold, his head, neck, and shoulders drenched, and covered with wet cloths; he was pallid, yet the blood continued to trickle. On the nares being plugged the scene was changed from wretchedness to comfort. To his surprize and delight the patient was changed to a comfortable bed, and was told he might, with perfect confidence, compose himself to sleep. I mention this to show the great value of plugging the nostrils, and its superiority to other treatment.

"The plan I advocate now is to fill the cavity of the nose with slips of lint introduced from before. I prepare a few slips of lint, about one foot long and half an inch wide, doubling two inches of the first slip over the end of a strong director, I pass it along the floor of the nasal cavity as far as the posterior nares; the rest of the slip is then packed in, and the extremity, which should be made to taper, is left projecting out of the nostril for the purpose of its more easy removal. After this another and another slip is thus introduced, until the cavity is full. The first gentleman I practised this plan upon was a very witty person, who was much amused at the process of taking out the slips, which he compared to the unpacking of a portmanteau; he named each slip as it came out after an article of dress.

"I was called by a medical man to plug the posterior nares for a patient of his. When I arrived the bleeding had ceased. The gentleman would not see me. I explained the above-mentioned method of proceeding to the medical attendant, who had, in the night, occasion to put it into practice; he found it easy of accomplishment, and perfectly successful in its result.

"Believe me to be yours truly,

"Josiah Smyly."

Desault and Larrey were in the habit of employing a piece of linen sewed into the shape of a glove, which they pushed through the anterior nares backwards towards the pharynx; this was then packed with lint or some such material, and then drawn forwards, so as to press on the surrounding parts, and thus by direct pressure seal up the bleeding point. Though Larrey speaks highly of this procedure, still it presents many and obvious difficulties;—first, accurately to pack, and secondly, when it has discharged its duty, to *unpack* it. Mr. Bell improved on this plan by substituting for the linen bag, a piece of the small intestine of a pig; this fastened at one end is introduced as far back as the pharynx, and then filled with fluid or air, and pulled forcibly forwards, so as to act as a

plug. In the 14th volume of the new series of the *Medical Times and Gazette*, p. 493, we find extracted from the *Boston Journal* an improvement on this suggestion of Bell's by Mr. Coate. I reproduce the passage:—"Plugging in Epistaxis.—Dr. Coate employs a very simple contrivance; it consists in a piece of pig's gut, eight inches long, tied at one end, and then turned wrong side out, so that the knot may be on the inside, on a child's silver canula. By this canula it is introduced through the nose to the pharynx, and then blown up, and tied an inch or so outside the nose. He often introduces a spoonful of saturated solution of alum into it. It plugs up both the posterior and anterior nares thoroughly, and to remove it, it must be pricked, and gently twisted or drawn out. Dr. Coate always keeps a yard or two of gut on hand in a bottle of diluted alcohol." Franck also recommends a plan of treatment based on similar principles, and these have been improved upon by M. Martin St. Ange, in his *Rhinobyon*. This has, superadded to a small bladder, a silver canula fitted with a stop cock; the bladder is to be pressed back into the pharynx through the nostril. Through the canula either air or fluid may be passed to dilate the bladder, when the stop cock is turned, and the dilated bladder is then to be drawn forward until it is firmly pressed up into the posterior nares; the anterior are then plugged, and the operation is concluded. To withdraw it, the cock is turned, the fluid or air allowed to escape, and the instrument can be withdrawn, carrying before it all coagula, &c. Those who have employed this plan, speak highly in its favour. Its great merit consists in no interference through the mouth with the pharynx being required, as in the ordinary manner of plugging the posterior nares, which we shall presently describe, a point of no mean importance, as all know who have ever performed this operation, and in the great facility with which it can be effected in the younger periods of life, when our patients are not usually so manageable as in more advanced age.

The method generally pursued in these countries of plugging the posterior nares, is so well understood, that it requires but a very few words of explanation at my hands.; it can be done either with the ordinary No. 10 gum elastic catheter, or with that most ingenious instrument devised for the purpose, by M. Belloc. I shall first describe the steps of the operation as performed with the assistance of the gum elastic catheter, a correct comprehension of which will facilitate my description of Belloc's instrument. Having prepared a plug composed either of folded lint or of a piece of

sponge, about the size and shape of the thumb, it is to be tied firmly in the centre by a piece of sound twine, about 18 inches long, the knot being tied in the middle so as to leave two equal lengths of the twine hanging at either side; you then pass through the eye of the gum elastic catheter, from 15 to 18 inches of stout ligature silk, and pass the catheter almost directly backwards, along the floor of the nares, until it reaches the pharynx; the patient is then directed to open wide the mouth, and with a long dressing forceps *one* end of the silk is caught, and drawn forward out of the mouth, whilst the other, on the withdrawal of the catheter, hangs out of the nose; the portion of silk that is outside the mouth is now firmly attached to one end of the twine that has been tied round the plug, and by pulling on the end of the silk that hangs outside the nose, we draw it also out through the nostril, and are in a position to proceed to place our plug *in situ;* grasping the plug between the index and middle finger of the left hand, we guide it back into the pharynx, and then up into the posterior nares, whilst with the right hand we draw forward the string that appears through the nostril, and pull the plug firmly into the required position; then the anterior nostril is to be plugged, and when that is done the string is to be again pulled firmly to secure the plug tightly in its position, then rolled round a small quill of lint, and secured with sticking plaster in some convenient position about the face. The string that hangs out through the mouth is to be fastened in a similar manner; taking care, however, that it is to hang loosely, in contradistinction to the nasal end, which is to be firmly on the stretch, so as to secure the retention of the plug in the desired position in the posterior nares.

Now, in description, all this seems simple in the extreme, but, in practice, it is anything but simple; a more troublesome proceeding, as this but too frequently proves, exists not amongst the minor operations of surgery. The patient, terrified at the loss of blood, half choked with the rush of blood down the throat ensuing on the position he is compelled to assume to allow the surgeon to catch and draw forward the string, and especially so, if of tender years, becomes unmanageable, and even in the most docile it is not always an easy task to lay hold of the string, situated as it is far back in the pharynx. To obviate this inconvenience, Mr. Belloc has invented an instrument in size and shape resembling a number 7 silver catheter, but of exactly one-half the length. At its extremity it is furnished with an eye, which,

however, is not attached to the body of the catheter, but to a spring that runs down within the catheter. Along this spring is a stylet, which can be drawn out so as to double the length of the instrument, and which, by a screw, can be attached to the end of the spring. When so arranged, by pressure on that portion of the instrument that is outside the nostril, the spring is protruded in the pharynx, carrying with it the eye armed with the ligature; this, in virtue of the curvature of the spring, presents in the anterior portion of the mouth, and thus enables the operator with ease to catch the ligature, and then the subsequent steps of the operation are exactly those already described. This instrument, with difficulty described, will be at once understood by the most cursory inspection, and will be found a most valuable adjunct in performing this troublesome operation. Still even it requires some dexterity on the part of the manipulator. In that which I possess the *curve* of the instrument is too great, and if it be carried too far backwards, the eye, on pressure, will not come forward on the dorsum of the tongue, but will, on the contrary, go *down the throat*, and thus complicate instead of facilitating the operation. We should, in its employment, not seek to *see* it at the back of the pharynx, but, *when we judge that it should be thereabouts, press down the button, and we will have the gratification of seeing the armed eye travelling along the dorsum of the tongue, and can then readily seize the string that will facilitate our every other step.*

Having secured the plug in its proper position in the posterior nares, in the majority of cases of epistaxis, is not alone sufficient to arrest the hemorrhage, it still will be essential to plug the anterior nares, for this reason, that it very rarely happens that we can place the plug on the *exact bleeding point*, and if we fail in so doing, all that we will have succeeded in effecting is the occlusion of the passage backwards, leaving that forwards open for the escape of the blood; if this, though, be also shut up, the effused blood is retained in the shut sac so formed, coagulates, and becomes itself the plug by which the further hemorrhage is arrested.

Presuming that the operation has been properly performed, and so far has proved successful, our next consideration will be, how long are these plugs to be let to remain? After 24 hours the anterior ones may be removed, but that in the posterior nares must not be interfered with *until suppuration becomes well established.* There are two periods when we will experience difficulty in removing the plug; when we try to do so at too *early* a period,

before suppuration has been set up, or when we allow them to remain for too long a time, when we will find, as the result, that granulations of luxuriant growth will have sprung up, and struck root into the plug, thus establishing firm connexions between the foreign body and the Schneiderian membrane, which can only be severed with considerable difficulty, a proceeding frequently attended with no trifling hemorrhage. Mr. Smyly, the respected senior surgeon to the Meath Hospital, informs me that he once saw the late Professor Macnamara experience considerable difficulty in removing a plug that had been permitted, by the surgeon who had inserted it, to remain an undue time without taking steps to remove it. If, on the occurrence of suppuration, the surgeon proceed to remove the plug, its extraction will be accomplished with facility and *safety*, for now there will be no danger of a recurrence of the epistaxis.

Authors on epistaxis write of this operation for plugging the posterior nares as if it were one of the most harmless in the entire range of surgery. In my opinion it is an operation that only should be had recourse to under the gravest circumstances, when every other method of arresting the flow of blood has been put in force and failed; when, in fact, it becomes a question with the surgeon whether to have recourse to it, or submit to the loss of his patient. Why I entertain this opinion I shall now briefly state. In the first place, even when most expertly and successfully performed, it is a proceeding most repugnant to the patient's feelings, and most incompatible with his comfort; the *malaise* that attends it is very considerable, the sufferer being, the whole time that the posterior nares are plugged, compelled to breathe through his mouth, which enforces an open and consequently a dried up, parched, condition of that organ: the sensation of the foreign body in this situation is indescribably unpleasant, so much so that we frequently experience considerable difficulty in inducing our patients to submit to it for the necessary length of time. Still, were this all, I should not write in such strong terms of disapprobation. But it is not all. Mr. Fleming informs me that the late Professor Colles entertained a very decided objection to this operation, founded on the fact of his having been called in to see a patient in whom tetanus ensued on this *trifling* operation, and which this distinguished surgeon attributed alone to the presence of the plug, acting as a foreign body, in the posterior nares. Nor is this the only and most serious danger; a very slight cause may loosen and detach from its position the plug in the posterior nares, when it will fall down upon the

epiglottis, and produce almost immediate death. In such an occurrence as this it is that the value of the piece of twine coming out through the patient's mouth will be recognized; in such an event it can at once be seized by a bystander, or by the patient himself, the plug instantly be withdrawn, and the patient thus preserved from certain immediate death. In the article on epistaxis in *Costelloe's Practical Surgery*, I find the able writer deprecating the employment of this string, although, in a subsequent portion of the same article, he alludes to this danger, and gives a case on the authority of M. Martin St. Ange, where a fatal result, consequent on this very accident, occurred in the medical wards of the Hotel Dieu. The late Professor Porter informed me of the occurrence of a similar accident, which terminated fatally, in this city, whilst he was a student: and whilst I myself was serving my time in the Meath Hospital to the late Sir Philip Crampton, I witnessed, in a patient whose posterior nares had been plugged by the late Mr. Rynd, a similar occurrence, when the patient's life was only saved by the greatest promptitude, and where I experienced the greatest difficulty in removing the plug from its perilous situation, *because of the non-presence* of this, in my opinion, most necessary string. The accident, most fortunately, occurred during the late Mr Porter's visit to the ward, when, of course, plenty of assistance was at hand. Had it occurred at any other period of the day, the result, in all probability, would have been far different, as, I need scarcely say, that the patient himself was physically debarred from describing what had occurred. In addition to these grave evils, I have seen erysipelas of the face subsequent to and consequent on the plugging of the anterior nares, and very frequently I have witnessed a most unpleasant ozæna persistent for some weeks after the plugs have been removed. Fortified with such experience, then, is it, that I feel myself justified in asserting, that plugging the posterior nares should be the surgeon's "last appeal."

In the article on epistaxis in *Costelloe's Encyclopedia*, to which I have already referred, I find it stated, on the authority of Blumenbach, that this disease is confined to the human subject. Being aware that such a statement did not invariably hold true, so far as the horse was concerned, I was anxious to ascertain whether, by experience, he could be supported in that statement by gentlemen who had made the diseases of this animal their special study. I therefore addressed some inquiries on the subject to Mr. Doyle of this city, the eminent veterinary surgeon, and received from him

the following interesting letter, which, so far as the horse goes, decides the point:—

"16, Westland-row.

"My dear Doctor,—In reply to your question as to the occurrence of epistaxis in the lower class of animals, I have to inform you that I have repeatedly seen it to occur in horses. For example, in Mr. Denis' Albatross running for the Corinthians at the Curragh, a very severe attack of epistaxis occurred, which, with some difficulty, I was fortunate enough to arrest. Running for the Liverpool Steeple Chase she had a second attack, which terminated fatally. Also in a horse the property of Mr. Heathcote, 11th Hussars, epistaxis took place whilst out hunting this season, which proved fatal; and in many other cases also that came under my own observation. I may mention, that plugging the nares with tow steeped in vinegar has proved the most effectual remedy in my hands.—Faithfully yours,

"Joseph Doyle, V.S."

In concluding these observations, it can scarcely be necessary for me to remark that the subsequent treatment of every case of epistaxis will require care and judgment on the part of the practitioner. To enter on this topic, however, would be to open for observation almost the entire range of disease. In the commencement of this paper I have pointed out the varied sources to which it may be traced. These will all require consideration on the part of the surgeon, who should always bear in mind that epistaxis is far more frequently a symptom than a disease, and as such we are bound to search for the "origo mali," and seek then to apply our remedy.

Art. III.—*Radical Cure of Reducible Hernia.* By Redfern Davies, M.R.C.S., Birmingham.

Since October, 1859, I have adopted, almost exclusively, for the radical cure of hernia, the method devised by Mr. Wood, and after finding, from the results of upwards of fifty operations, that it is the most successful and least painful plan known, I most unqualifiedly prefer it.

The way I perform the Operation is as follows:—The patient lying on his back, and his bowels having been that day opened,

chloroform is administered if wished for. An incision, one inch and a-half below the spine of the pubes, is then made for about three-quarters of an inch, the *integument* of the scrotum only being cut through; the lips of the incision are now successively seized hold of, and by a blunt-pointed pair of scissors a dissection is made beneath the integument, for a space of two inches around the external opening of the inguinal canal.

The conjoined tendon is now to be felt for by the finger of the left hand, which pushes before it some fascia. The needle recommended by Mr. Wood is then carried on the finger to the external abdominal ring, through which it is to be passed for a distance of about half an inch, or it is thrust through all the soft parts above. When the point has emerged through the integument, the needle is threaded by a silver wire, and then withdrawn with the wire. The first and most difficult portion of the passing the wire is then accomplished.

The finger now seeks for the external pillar of the ring, and on it the needle, bearing a loop of the wire already introduced (*i. e.*, the wire simply bent on itself), is carried about half an inch within the canal, and all the soft parts above it are transfixed. The extremity of the needle appears on the surface of the abdomen, bearing a loop of wire, and it easily glides down the *free* end of the wire when the loop is held.

And again, upon the finger having found the internal pillar, the needle bearing the wire is carried and made to pierce the tissues above, and a little within the canal. The needle having been disengaged from the wire is lastly withdrawn.

The free extremities of the wire are then passed through an aperture in an oval piece of thickish glass (three inches long by two broad), and the loop through another aperture a quarter of an inch distant, and having been pulled together as close as can be, they are twisted over each other, which securely fastens them.

The testicles having been supported by some tow, and the parts washed, all is done.

During the day of operation some varicocele appears, which depends upon the veins of the cord being pressed upon by the disturbance of the parts and the consequent swelling, and remaining but for a few days, indicates only that the operation has been efficiently done, and requires no notice to be taken of it.

The loss of blood during the operation amounts to about half a tea-spoonful.

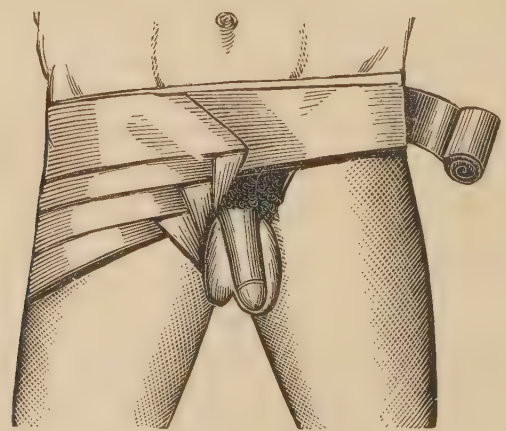
The wires may be unfastened on the eighth day, and removed

entirely on the next. The punctures and incision from which some pus will exude, should be treated by water dressing; and when healed (in about one week's time), the patient may be allowed to get up, and is perfectly cured.

The propriety of applying a spica bandage and compress, is now a very much debated point. We know that continued pressure induces absorption, so that it is reasonable to infer that the constant pressure of a spica bandage and compress, will so act upon the recently introduced tissues in the inguinal canal and ring, and that, eventually, there will be produced as bad a state of things as there was before any operation was attempted.

However, practically, such is not the case. In my former operations (those after Wützer's method) I used the bandage with a graduated compress, most extensively, and though not perfectly satisfied with it, I did not find those effects produced, which might have been expected from a theoretical consideration before hand.

Believing, however, that for a time the abdominal walls must be weaker in the inguinal region than elsewhere, and that concussions had better be guarded against, I now use a simple bandage, and by this means, cover in firmly the whole of the lower half of the abdomen.



The rationale upon which this operation acts, is, I believe, as follows:—A portion of fascia having been freed from its adjacent parts is, by means of the wire, fixed in the canal and rings, so as

to form a plug which prevents the gut, &c., from escaping out of the abdomen. By this means, it acts in just the same way as Wütz er's operation does; and the only difference between them is that, in Wütz er's, union is attempted between two tissues which were not intended by nature to unite; and in Wood's, parts are united (and that subcutaneously) which are accustomed to be so, naturally. Again, the rings, &c., instead of being forcibly distended, as in Wütz er's method, are made of less size, by having their pillars, &c., drawn firmly together; and kept so, by becoming united with the fascia drawn into them.

Wood's operation may be looked upon as simply gliding into another place, tissues which have a natural affinity one for another; and by this means, causing a canal, &c., which has become distended by pressure, to recover its natural calibre.

The reasons that have led me to prefer this operation, &c., to Wütz er's, even with the improved instrument I have invented, are:—Firstly, its immense superiority, as founded upon the practical observation of more than fifty cases upon which I have operated in this way. Secondly, by the consideration, that a wooden plug (even with the addition of a movable lower portion), can never adapt itself to the tissues like soft parts. And thirdly, that there is, and must be, great difficulty in inducing two surfaces to unite one with another, which were never intended to do so by nature, viz., the causing two layers of invaginated scrotal integument to adhere together.

The improved instrument above alluded to, I have already described elsewhere; but I now again figure and describe it. Where Wütz er's operation is adopted, in cases of scrotal and femoral hernia, with the tissues relaxed and the rings of large size—say capable of admitting two, three, or more fingers—considerable difficulty and disappointment is experienced in endeavouring to effect a cure by one operation; and it has occasionally happened to others, and to myself, to be obliged to repeat the process.

From practical acquaintance with the subject on the living, and repeated trials and experiments upon the bodies of the dead, who have been affected with hernia, I have been led to believe, that the cause of such failures is not attributable to any fault in the theory of the method, but to a defect in the instrument; and upon the following grounds, submit to the decision of practical test, that they would be obviated by the adoption of the accompanying mechanical improvements.

Upon examining a case of rupture in which the operation for the radical cure has failed (supposing, of course, that it has been properly managed, together with the proper after-treatment), the rings and the canal will be found to be obliterated, probably to some three-fourths of their extent, or there may be only an aperture which will, with difficulty, admit a crow's quill; and thus, though the patient may be greatly benefitted, and with the aid of a truss, resume his duties, a *radical cure* has not been effected.

That portion of the canal and rings which have been blocked up, is invariably, that which is nearest the abdominal walls. "The gut slips down behind the plug," are the terms in which, both surgeons and patients express the mishap which has occurred, and the reasons for this are, I believe, as follows:—The anterior or superior layer of the invaginated integument, is subjected to, not only the pressure of the wooden plug in Wütz er's instrument, to keep it in apposition with the opposed surface of the canal and rings, but also to the direct pressure of the compressor. The compressor exerts its influence exclusively upon the parts included between it and the upper surface of the said wooden plug, and in no wise affects the posterior parts:—viz., the posterior layer of invaginated integument, and upper surface of the canal and ring, whose sole chance of being kept in apposition depends upon the accuracy with which the plug fits the canal, &c., as a whole.

The floor of the canal, &c., especially where the tissues are lax, as generally occurs in old and large ruptures, does not present in the same manner an opposing resistance to the wooden plug as does the compressor; and thus, should the two former be not very accurately adapted the one to the other, adhesion cannot even be expected to occur.

The mouth or internal opening of the canal, is funnel-shaped, with the posterior surface the more sloped; consequently, if there be a weak point it will be there, and it is sure to receive all the shocks of the gut during the process of cure.

Besides, it is evident that a *cylinder*, even closely applied to the rest of the extent of the canal, cannot fill up its funnel-shaped mouth; but must have an interspace which will be on the posterior surface.

And again, it is not always practicable to introduce to a sufficient extent, a solid plug, which would best fit the internal ring, on account of the resistance of the other tissues to its passage; besides entailing an endless variety of such plugs.

By the adoption, however, of the principle I now propose, viz., a plug, whose lower half is capable of expanding, those difficulties are severally overcome.

A glance at the diagram will render its application at once evident; it will be seen by turning the handle of the dilating screw, and thus causing the lower half of the instrument to expand, that the pressure upon the parts included between the upper portion of the plug and the compressor, is left in exactly the same relations and conditions as in the usual instrument; but, that a force is exerted upon the posterior portion of the invaginated integument, canal, and rings, which it gently, but firmly, retains in complete apposition one with the other.

By reason of the greatest point of its expansion being at the extremity of the instrument and gradually tapering, two objects are accomplished; first, the funnel-shaped mouth and the internal opening is filled with a plug, whose sides are inclined towards its own—the invaginated integument being, as it were, modelled upon it; and secondly, the rest of the canal is, at the same time, subjected to no undue pressure.

The principle adopted by Mr. Spencer Wells, is likewise, made available, viz., having the transverse diameter of the instrument much greater than the antero posterior, whereby the shape of the ring is altered, it being converted into a mere chink, and thus affording an additional security against the descent of the gut; and so leaving as small an amount of space as possible between the opposed surfaces of the *doigt de gant* to fill up when the instrument is removed. A thin India-rubber finger-stall caps the end of the instrument preventing any soft parts getting between the blades.

With regard to the metallic uprights and screws, they are so

arranged that the amount of pressure exercised by the compressor, may be applied just as is required; an excess may be precisely thrown, when desired, upon the part pierced by the needle, or upon the edge of the *cul-de-sac*, by alternating the screws; or a general and equal pressure may be exercised upon all the parts included between the compressor and the plug.

With regard to the permanency of the cure effected:—The first case I did, and which is reported in the *Medical Times*, June 12, 1858, remains still well on one side, and has done so ever since he was operated upon, then being received into the police force. Several men have entered the army; and I always ask people upon whom I have operated, how they are when I see them again (which in a workhouse practice—tramps, &c.—was very frequent), and I am invariably told, that their cases still remain perfect. Some few cases, however, I know of as having relapsed.

I have operated, by the subcutaneous method, upon upwards of fifty cases, and have failed to *cure* but five cases. In one of these the person, who was not of strong mind, made, at the time of withdrawing the wire, such a struggling and disturbance, from fear that he should be hurt, that, as I told him at the time, the operation was a failure, for, by his movements he forced the gut down. In the other cases I know of no probable solution to account for the failure. In one case where the rings, &c., admitted three fingers breadth-ways, a second operation was found necessary.

I have never seen the least danger or pain in any one case, consequent upon the operation. In some hard-lived men, bronchitis and flatulence, chiefly the result of assuming the recumbent posture, came on, and were easily relieved by the ordinary medicines.

From frequent and careful dissection of the parts, I had been induced to believe that the peritoneum is not touched in this operation; and the same opinion has been verified by a *post mortem* examination of the parts, some four months after the cure had been effected—the patient dying from fever.

In one case, occurring in the practice of Mr. Harding, of Stourbridge, upon whom I operated, the patient having refused chloroform, became so unruly during the operation, that he seized my hands several times whilst I was passing the needle; upon being told that if he did so again I should be compelled to leave, he became rather quiet and did not again seize my hands. In the night of the same day, Mr. Harding was sent for to him, and found him labouring under an acute attack of peritonitis; he instantly

took off everything; and in the morning sent me word—upon arriving at the house I found he had died. No *post mortem* examination was allowed.

ART. IV.—*Complete Resection or Extirpation of the Astragalus.* By DR. OSCAR HEYFELDER, of St. Petersburg.

SINCE I published my book treating the resections of bones and articulations, two cases of extirpation of the astragalus occurred to me which I think worth communicating.

CASE I.—Ivan Terasimof, 30 years old, coachman, received a semi-luxation of the astragalus by a heavy butt falling upon the back of the extended and fixed right foot. No wound of the skin, but a very considerable swelling of the ankle. Received into the hospital for workmen: the inflammation and swelling yielded to an antiphlogistic treatment; but the skin of the back of the foot where it was over-extended by the luxated astragalus, became gangrenous, and the foot remained in the position of extension, the ankle joint being incapable of any movement. After some weeks, not only this state remained, but a fistula had formed itself on the inside of the foot, corresponding to the anterior and exterior parts of the astragalus, where a probe might be introduced into the softened osseous tissue, and easily made to penetrate even to the skin at the exterior side of the foot. The dislocation of the astragalus being an irreducible one, and the osseous tissue being even carious, I proposed the extirpation of the dislocated bone; the more so as this operation, in 63 previously recorded cases, had given very good success.

The 28th of September, 1860, I proceeded to the operation. A curved incision, the convexity towards the toes, divided only the skin, and permitted me to separate the skin from the subjacent tissue, to separate the well conserved extensor tendons, and put them aside. The dislocated astragalus being pressed into the tissue of the cuboid bone, and firmly retained by the posterior and inferior ligaments, it could not be removed but with much difficulty, and by dividing the tendons of the extensor digitorum longus. The astragalus being extirpated, and the morbid parts of the cuboid being removed by help of a gouge, I joined the wound with silver sutures, fixed the foot upon a splint, and laid it in a warm water bath.

30th September.—The pains of the wound very tolerable in comparison with what he had suffered before. Suppuration good; the whole state very satisfactory. On the 8th October the sutures were removed, and almost the whole incision found closed by the first intention. The movement of the toes very easy, and not at all painful. In this, as in other cases, the *secondary operation*, in comparison with primary ones, has proved preferable, by the slight degree of reaction, and, in general, by the easiness with which this was supported.

When the permanent bath ceased to be agreeable to the patient (about the 14th day), the limb was put in a dry bandage, and, from time to time, movements were undertaken. He received a corroborating diet, and went on pretty well; when, three weeks after the operation, the foot was taken with erysipelas, which is almost endemic in that hospital.

A fortnight after his restitution, when the movement of the toes, and even of the ankle joint, had been established, hospital gangrene broke out in the wards, with which he was very dangerously affected. Our usual remedy, cataplasms of grated carrots, and the internal use of decoction of cinchona with aromatic tincture and acids, restored the man, after that even amputation had been taken into consideration. From the seventh week the convalescence went on without further interruption. Active and passive movements took place every day; and with the beginning of December the first essays of walking could be made without much pain or difficulty. The 26th December the man left the hospital, quite restored to health, his foot being cured. The wounds closed; position and movement normal; no deformity; the shortening of the limb 1½cm. (six-tenths of an English inch); the sole something flat; the back of the foot of a quite normal form; sensibility, temperature, and the colour of the skin like that of the other foot.

CASE II.—Ludwig Susemuhl, 14 years old, baker, of a delicate complexion, fell, in the beginning of the month of October, 1860, and got a distortio in articulo pedis, whose consequences had not yet quite disappeared, when he fell a second time, and hurt the same ankle joint in a very painful way. When he entered the hospital for workmen, on the 10th November, we found an irreducible dislocation, a considerable swelling of the foot, great painfulness, which increased by touching or movement; inability to walk. Twenty leeches, and fomentations with aqua saturnina could only

allay the pains and inflammation, but not change the general state of the foot; nor could the local application of unguents, and the internal employment of nitrate of soda cure the symptoms of a local chronic inflammation and a general state of fever. Abscesses, which formed on the inner side of the ankle joint during the month of December, were opened, and gave issue to a laudable pus. They corresponded to a rough, carious, and softened part of the astragalus. The whole bone proving carious, and the neighbouring bones being intact, I proceeded, on the 28th December, to the removal of the diseased astragalus. As I believe it of great importance in all resections that the wound of the skin should coincide as little as possible with the defect in the bones (the former should be as far as possible from the latter), I made a real gaiter-like incision (like that of Baudens for the exarticulation of the ankle joint). Continuing, as in the former case, and finding the bone not as firmly attached, I succeeded in keeping sound all the extensor tendons, and in removing the bone in two halves. The tendons being isolated, and kept aside, I introduced the chain-saw, and divided the astragalus in an oblique line. No blood vessel being to tie, I adopted the same bandage and treatment as in the former case. The local success being almost as good as after the first operation, the symptoms of tuberculosis pulmonum et intestinorum showed themselves more and more; the wound got gangrenous; and in the end of January he died with phthisis generalis. The *post mortem* examination proved lungs and bowels covered with tuberculous deposits, and the wound of the foot filled with unhealthy pus, notwithstanding its partial reunion.

If we add these two cases to the rest, the operation has been done in 78 cases, since the year 1670, when Fabricius Hildanus performed it for the first time. After him it has been executed by Broglie, Aubray, Ferrand, Desault (five times), Manduyt, Laumonier, Rumsey, Trye, Hey, Charley, Daniel, Percy, Roux, Dupuytren (four times), Evans, Green, Lynn, A. Cooper (twice), West, Stevens, Follot, Nowood, Cloquet, Arnott, Thierry, Norris, Heidenreich, Hinterberger, Rognetta, Dietz, Quetalet, Velpeau (twice), Robert, Wackley, Chabanon, Thore, Letenneur (twice), Statham, Estevenet, Hancock, Addenbrock, Smith (eight times), T. F. Heyfelder (twice), Chassaignac (twice), Gisborne, Husband, and the Author (twice). Partial resections have been made by Moreau (the father), Duverney, Rattley, Champion, and another English surgeon whose name I do not know. So that five out of

78 were partial—73 total; 11 of the 78 operated on died, 67 lived. Of this 67 operated on, whose lives were preserved, two were afterwards subjected to amputation—one for deformity and uselessness of the member; 65 were fully restored. The fatal cases form, consequently, one-seventh, the unsuccessful ones one-sixth of the total number.

Ankylosis of the ankle joint is not at all, as Boyer pretends, the necessary consequence of the operation; as, out of the 67 successful cases (which generally are not even extensively enough communicated) I found 10 in which the movableness of the foot, or even the formation of a new articulation was established and expressly named. Ankylosis may, of course, take place by very acute inflammation, by want of passive and active movements, or by retraction of extensive cicatrisation, as it happened in one of Chassaignac's cases.

The indications for this operation are exceptionally caries or necrosis; usually traumatic injuries (69 times out of 78), these may be gunshot wounds, or fractures, or complicated luxations; the latter are the most frequent cause for the extirpation or resection of the astragalus; 68 out of 78 cases were operated on for this reason. Not only luxations complicated with fracture (twice out of 68 times), with wounds, with secondary disease of the bone, but even fresh and simple luxations, which cannot at all, or not without much difficulty and power be reduced, should rather indicate the partial or total resection, as Dupuytren (*Annuaire Méd. His. des Hôp. de Paris*, 1819, p. 28) did in one case with full success. On the contrary, I believe that in my second case, and in one observed by Professor Bruns (*Deutsche Klinik*, 1857, pp. 479, 480), where the man died without having been operated on, an early resection of the astragalus might have saved the life.

Art. V.—*An Essay upon the Malformations and Congenital Diseases of the Organs of Sight.* By W. R. Wilde, M.D., V.P.R.I.A., F.R.C.S., Surgeon to St. Mark's Ophthalmic Hospital, Honorary Member of the Medical Society of Stockholm, &c., &c. With Illustrations. Part IV.

(*Concluded from* vol. xxxi. p. 74.)

MALFORMATIONS OF THE VITREOUS BODY, RETINA, AND OPTIC NERVE.

Having already described the formative process in the human eye, it is unnecessary to enter at any length upon the peculiarities in the mode of growth in the retina. Within the last two years V. Ammon published a memoir on the Embryology of the Eye, in the *Archiv für Opthalmologie*,[a] in which he says the retina appears, in the fourth or fifth week, as a white downy membrane in contact with the lens, open behind and on one side. In some very rare cases of development this retinal fissure remains permanent, an instance of which is given by that author in his previously published work, the *Klinische Darstellungen der Angebornen Krankheiten*, Bd. iii., Taf. xi., Fig. xv. From the middle of the third to the middle of the fourth month, the retina resembles brain—white and thick, and filling up the space between the choroid membrane and vitreous body. About that period a ridge or projection, like the pecten in birds, passes in through the slit in the retina to a sulcus in the vitreous structure; but this in time is absorbed. During the fourth and fifth month, convolutions like those seen on the surface of the brain are observed on the retina, and are not altogether lost till the eighth month. A few of these folds may, in some cases, be seen in the site of the fissure, even up to the ninth month; and V. Ammon says that the persistence of this embryonic condition, in the slightest degree, impairs vision. In the second month, nerve-cells and granules are recognisable, and in the third and beginning of the fourth the ora serrata is discernible; but the optic nerves do not appear till about the end of the third month. When the brain and eye-cells, originally in contact and communication, become separated by the orbital plate of the frontal bone, the optic nerve is developed in the form of a fissure or gutter, which is afterwards

[a] See review thereof in the August number of this Journal, vol. xxxii., p. 127.

closed along its length, and filled with nerve matter. The retina and optic nerve are joined towards the end of the third month; and in the fifth, the arteria centralis, which has been formed very early in fœtal life, dwindles. Any interference with the foregoing process must result in malformation, or congenital disease.

Besides the cases mentioned above, dissections have been given of club-shaped retinæ, each of which presented a pyriform mass, lying between the ocular end of the optic nerve and the lens. In other instances, it is said that there was over-constriction of the optic nerve at the cribriform plate.

In cases of microphthalmos, and other manifest alterations and arrests of development in the eye, there is generally evidence of deficiency of formation in the vitreous body or retina, but careful dissections of such have been rarely recorded.

CYCLOPIA.

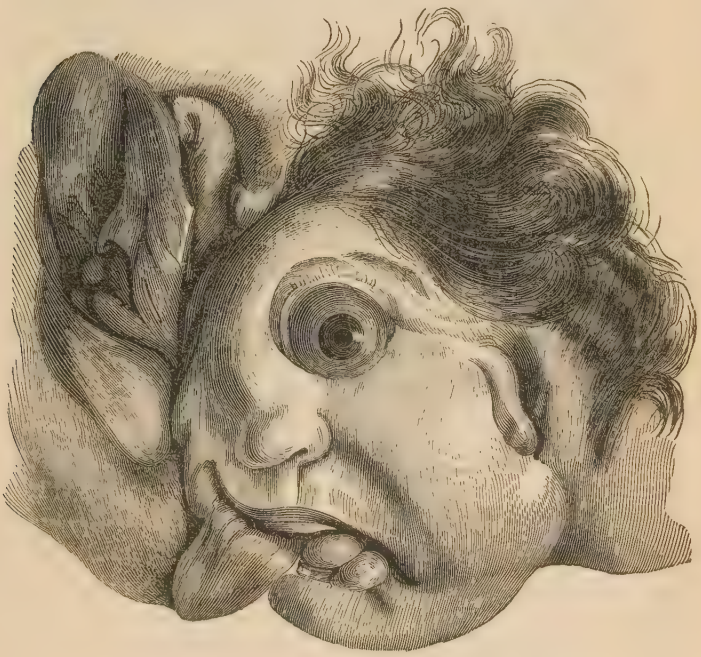
Monstrosities in which there is but one apparent eye are not unusual in the human subject, and are also seen in the lower animals, especially lambs, kittens, and calves. In nearly every instance the fœtus is acephalous. Where only one eye exists, but retains its natural position, the case may be termed monoculus; and where the eye is misplaced, it may be called a cyclops. In this latter condition, although there is apparently but one eye, it consists of two globes fused together, and there are either three or four eyelids.

From Dr. Mayne's able article on the Optic Nerves, in *Todd's Cyclopædia of Anatomy and Physiology*, I extract the following passages:—

"A single eye placed in the middle line of the forehead, and in general a trunk or proboscis growing immediately above this solitary organ of vision, constitute the most striking apparent anomalies in monsters of this class. The fundamental defect in these monstrous fœtuses consists in the total absence of the organ of smell, in consequence of which deficiency the symmetrical organs at either side become united in the middle line, and actually engrafted upon each other; the two eyes are conjoined so as to form but a single organ of vision, and the very same metamorphosis occurs in the two orbits the two optic foramina, the two optic nerves, &c. That this is the rationale can scarcely admit of a doubt, since in some parts of the organs the fusion remains incomplete; thus two crystalline lenses

still exist in the interior of the solitary eye-ball; a double set of muscles, with their corresponding nerves, are provided for the globe of the eye; and four eye-lids protect the organ in front, causing the aperture of the lids to assume a quadrangular form."

One of the most remarkable instances of monoculus, or a single eye in its normal position, occurred in the Dublin Lying-in Hospital, about fifteen years ago, and from the recent specimen of which case I had the accompanying illustration made. The fœtus had nearly



arrived at the full period; one side of the head and a large portion of the face were deficient, and the parts were there attached to the shoulder, as shown in the engraving. The preparation still exists in the Museum of the Lying-in Hospital.

PLURALITY OF EYES.

This peculiar form of malformation, to which may be given the name of polyoculi has not heretofore been mentioned by authors. The accompanying illustration, from a drawing which I had made many years ago, of a four-eyed monster, which occurred in the

Dublin Lying-in Hospital, affords an example of this very rare malformation. This child was in other respects well formed; but

the upper portion of the head and face was double, all the parts below the nostrils being fused into one.

Vrolik, of Amsterdam, who paid much attention to the subject of Cyclopia, in 1834 and 1836, has divided this form of congenital malformation into five varieties:—1. Where the eye or eyes are not visible externally; in which there is a single orbit, with a slit between some folds of skin, marking the site of the eyelids; the orbital portion of the frontal bone generally absent, and no optic nerves. 2. A single eye, visible externally. 3. A single sclerotic, containing one or more of the internal parts in duplicate. With this variety there is generally a snout-like nose. 4. The division into two globes is more distinct than in the former case. 5. The eyes are double, partially or completely, but divided by a septum, and there is a proboscis-like nose.

The state of the eyelids, from a mere slit to that of a triangle, and finally a lozenge-shaped opening, depends upon the foregoing

condition of the globe. It is manifest that the fusion of the eyes in cyclopia is a pathological condition consequent on an arrest of development in other and adjacent parts; and the state of the choroid and other internal structures depends on the greater or less amount of fusion of the corneæ and sclerotics.

Art. VI.—*On Carbonic Acid in Mineral Waters.* By Julius Althaus, M.D., Member of the Royal College of Physicians of London, &c.

One of the most important and interesting constituents of mineral waters is carbonic acid, the "spirit of the springs," which not only greatly contributes to the solubility of certain salts contained in such waters, but also renders them more palatable and more agreeable to the stomach. It is especially important for chalybeate waters, which, when devoid of carbonic acid, soon lose the iron which was in solution, and also become heavy and unpalatable. There are some very strong chalybeates in England, as, for instance, the springs of Sandrock, in the Isle of Wight, those of Dorton, in Oxfordshire, and those of Tunbridge, which, if they only contained carbonic acid gas, would no doubt attract a large number of patients from this and other countries, who now resort to the waters of Spa, Driburg, Pyrmont, Schwalbach, and other continental places. The strongest chalybeate known in the whole world is the Aqua Ferrata di Rio, in the island of Elba; but as it does not contain any carbonic acid, it is entirely useless for medical purposes.

In mineral waters, carbonic acid is found in three different states. It is either "*bound*" to certain bases, with which it forms carbonates; from these the gas does *not* escape, when the water is heated; or it is "*half-bound*," forming sesquicarbonates and bicarbonates, from which compounds part of the gas is disengaged as soon as the water comes in contact with the air, and still more rapidly when it is heated; so that, since certain salts are only soluble as bicarbonates, and insoluble as carbonates, they are precipitated as soon as the surplus atoms of carbonic acid are gone; finally, it is contained in the waters *free*, as gas, which escapes at the ordinary temperature, as soon as the water rises out of the earth, and the pressure under which it was in the interior ceases. This escape is more rapid and powerful when the water is hot or artificially heated. Carbonic

acid is found almost entirely pure in the neighbourhood of the Lake of Laach, in Meinberg, and Driburg, while in other places it is found mixed with nitrogen, sulphuretted hydrogen, and oxygen.

The tension with which the gas escapes, shows considerable variations in the several mineral waters. Where there are many outlets for it in a certain locality the tension is, generally speaking, not considerable; but if borings are made in places where there has been no previous exit of gas, the pressure is sometimes so powerful, that as soon as an opening is made, it rises twenty or thirty feet into the air, carrying with it large stones from the boring hole. This has often been observed in boring for artesian wells. The same is the case, if the escape of the gas is accidentally or intentionally impeded. Thus, some time ago, the tube connected with the acidulated spring at Pyrmont, had become obstructed, whereupon the gas heaved up not only the large metal funnel, which, at its upper end, is eight feet in diameter, but also the whole cottage that had been built over it.

The quantity of carbonic acid contained in the spas is very variable. It is well known, that common spring water contains a certain amount of carbonic acid (from one-sixth to one-fourth of a cubic inch in the pound). River water is also slightly impregnated with this gas, and a little more of it is found in sea-water than in fresh water. The small quantity contained in drinking water is sufficient to impart to it a refreshing taste, which no water has that is quite devoid of carbonic acid But the amount of this gas contained in springs, rivers and the sea, is very trifling when compared with the quantity found in certain spas. It varies from one to seventy cubic inches in the pound, and such waters as contain ten cubic inches or more are called acidulated springs.

The amount of carbonic acid found in mineral waters is dependent upon several conditions, of which the chief are, hydrostatic pressure, and temperature. According to Lersch, one ounce of water at a temperature of from about 40° to 60° Fahrenheit, absorbs at the ordinary pressure of air, one grain of carbonic acid. If the pressure increases, more gas is absorbed, but not in the same ratio, as by a pressure equivalent to seven atmospheres, not seven, but only five times the ordinary amount of gas is dissolved. As soon as this pressure ceases, gas-bubbles are set free from the mineral spring, in the same way as on opening a bottle of Champagne.

The escape of carbonic acid from the springs, is considerably influenced by the variations of atmospheric pressure. When the

barometer rises, less gas is set free; but if it falls, as, for instance, before a storm, the amount of gas evolved is very large, the bubbles rise more rapidly, the surface of the springs appears more agitated than usual, the water has a more refreshing taste, and, where baths of this gas are given, the bathers find it impossible to bear the powerful effects of it; a circumstance which has been more especially noticed by M. Bertrand, in the gas-baths of the Auvergne. The carbonic acid discharged by the Racoczi of Kissingen, varies, according to the atmospheric pressure, from 110 to 170 cubic inches of gas in a minute. These gas springs may, therefore, serve as indicators of an impending change in the weather, and only seldom deceive the observer. In consequence of a diminished amount of gas in some springs, oxide of iron, which is only kept in solution by carbonic acid, is precipitated, and imparts to the water a red colour, which mostly indicates the approach of heavy rains. It is from such and similar natural phenomena that weather-wise persons draw their prophecies.

The *temperature* of the water has also an important bearing upon the amount of carbonic acid contained in it. The capability of water to absorb carbonic acid, decreases in an inverse proportion to its temperature. Accurate calculations have shown, that 1,000 volumes of water will, when heated from 40° to boiling point, expand to 1,043 volumes, while 1,095 volumes of carbonic acid, which are absorbed by 1,000 volumes of water, expand to 1,417 volumes; therefore, if acidulated water is heated, the gas expands much more largely than the water, and for this reason alone part of it must escape. But there are other influences at work, which carry off a still larger quantity of gas from heated water, namely, the diminution of affinity which exists between hot water and other gases, but its own; the more steam there is present in water, the less of foreign gases can be kept in solution; besides, the steam bubbles, which rise from water when heated, mechanically carry the carbonic acid away with them. At boiling point carbonic acid is entirely expelled, as are in fact all foreign gases; but gentle heat is not sufficient to drive the gas entirely out. Thus water used for bathing, at a temperature of 86° to 88° Fahrenheit, may still be so much saturated with the gas, that, if the patients enter the tubs, the whole surface of the body becomes thickly covered with bubbles of carbonic acid, and if wiped off they immediately re-appear. A low temperature enables the springs to retain a large quantity of carbonic acid, and, consequently, to keep in solution a comparatively larger

quantity of the carbonate of lime and magnesia, oxide of iron, and other substances which are insoluble in the absence of this gas. If the latter escapes, the salts just named are at once precipitated.

The more or less intimate connexion of carbonic acid with certain mineral waters, has been the subject of much mystical misrepresentation. Thus it was observed that the gas is more loosely bound to the acidulated springs of Silesia than to those of Pyrmont, Spa, Seltzers, and Driburg; that the gas seemed only to travel through some of the springs, while others were very firmly impregnated with it; and such and similar observations were adduced to prove that physical laws were not sufficient for explaining the wonderful phenomena connected with the "spirit of the springs." But if we analyse the actual state of things, it is not difficult to account for it in a scientific manner. Thus, for instance, we should naturally expect that the water of Reinerz, in Silesia, would lose its carbonic acid sooner than that of Driburg, in Westphalia, as the former has a temperature of 66°, and the latter of 51° only. But it is true that the temperature and pressure are not in all cases sufficient to account for the more or less intimate connexion of carbonic acid with water; in such instances, however, we can always trace other physical or chemical influences at work. Thus, if water saturated with a certain gas, comes in contact with other gases which it does not yet contain, it will dissolve a certain amount of these latter; but, with the loss of a certain quantity of the former. If water, which, when rising from the earth, contains no other gas than carbonic acid, comes in contact with the atmosphere, it at once absorbs nitrogen and oxygen, whereby carbonic acid is driven out; but when water is already impregnated with nitrogen and oxygen, before it rises, carbonic acid will be the more firmly bound to it. Finally, we have to consider that water keeps gases less easily in solution, in proportion to the increase of its own specific gravity. Carbonic acid, therefore, escapes more rapidly from strongly concentrated saline waters than from such as contain only a small quantity of solid ingredients. If these circumstances are borne in mind, we shall almost always be able to explain the relations of carbonic acid to water, and may, in fact, often determine, *à priori*, whether a certain spa is likely to contain much or little of this gas. Thus, for instance, the brines and bitter waters which contain from 80 to 2,000 grains of salines in the pound of water, will not contain much carbonic acid; the bitter water of Friedrichshall, in which 193 grains of salines are dissolved, does not contain any carbonic acid.

Thermal springs will also contain very little of it, on account of their high temperature, while such waters as are rather cold and contain only a moderate quantity of salines, present the most favourable conditions for absorbing a large amount of this gas, and keeping it in solution for a considerable time. In some spas it is contained in such large quantities that it constitutes their chief element; while in others carbonic acid is not the characteristic feature of the water, although it essentially modifies the composition and the effects of the same.

The sources from which mineral waters derive carbonic acid are of various kinds, and where they are abundant, waters which have a high specific gravity and a comparatively high temperature may contain more gas than others of, perhaps, less gravity and temperature, but which are in a neighbourhood where the sources of it are sparing. Small quantities of carbonic acid are absorbed by the springs from the upper strata of the earth, which attract it from the atmosphere, and in which it also accumulates by putrefaction of organic bodies. Fossil remains of plants contain a large amount of carbonaceous matter; and if water runs through such strata their substance is decomposed by the oxygen, which is always present in it; and thus carbonic acid is formed, which is then generally found together with sulphuretted hydrogen. That free oxygen is lost in this way, and oxygenation of carbon takes place, is evidenced by the circumstance that common spring water contains less oxygen than rain water (respectively 16 and 7 volumes of it in 1,000 volumes of water).

But the sources of carbonic acid I have just enumerated only hold good for a limited number of acidulated springs, most of which are, no doubt, connected with active or extinct volcanoes. Exhalations of carbonic acid, either in its free state as gas or united with water, are generally the last remnants of Plutonic catastrophes. The carbonic acid can at present only rise where disruptions of the crust of the earth exist, and its upper strata do not offer an impediment to the exit of the gas. Such rents we find, for instance, in Germany, at Pyrmont, where the well-known Grotto of Dogs is filled with pure carbonic acid; and powerfully acidulated chalybeate springs issue from the fissures in perpendicular layers of sandstone. Carbonic acid also rises from the basalt formation which we find extending through Germany from the Eifel to the Riesengebirge. In the neighbourhood of the Lake of Laach there are more than a thousand acidulated springs close to each other. In some of them

the bubbles which escape from the water are as large as the head of an adult, and a noise as of hissing, whizzing, and gurgling is heard at a great distance. Within a few miles of Marienbad we find 124 acidulated springs, and the quantity of carbonic acid developed in them is something prodigious. From an approximative calculation the springs of Meinberg furnish about one million of cubic feet annually, and those of Nauheim eleven millions. In France we have exhalations of carbonic acid in the cave of Montjoly, in the Auvergne, and the Puits de Nérac, in the Vivarais. In Italy we find the gas-springs of Sciacca and Latera, at the foot of the Etna; the famous Grotto del Cane near Vesuvius; the Lake of Amsanctus, near Naples, in which the carbonic acid is mixed with sulphuretted hydrogen; and the Guada Mortale, in the neighbourhood of that lake, which contains pure carbonic acid, and where sheep, hares, and rabbits are often found suffocated. In Greece there were and are still many places where escapes of this gas occur; such was the steaming cave in Apollo's Oracle at Delphi, where the Pythia pronounced her prophecies, and of which no remains are left; also the gas-springs in the sacred forest of Dodona, near Epirus, the most ancient oracle of the Greeks; the springs of Thermopylæ, and many others. The phenomena observed in such places are so remarkable that we cannot be surprised at finding an uneducated age and people looking upon them as manifestations of supernatural powers. In fact, the hissing and gurgling sounds, occasioned by the discharge of the gas, were, by the ancients, believed to be the voices of demons. It was in places like those just mentioned, which were called the "spiracula Orci," that, according to Homer and Virgil, Odysseus and Æneas went to the lower world to meet the spirits of the departed; that oracles were founded which were used by a cunning priesthood to deceive the vulgar; and it was into the awful lake of Amsanctus that, according to Virgil, the fury Alecto, in her anger, precipitated herself from the summit of the mountain.

Volcanic agency does not, however, *produce* carbonic acid; it merely provides it with an outlet, tearing asunder the crust of the earth, and taking away the obstruction to the free escape of the gas from the interior of the globe. The most abundant source of carbonic acid is, no doubt, the decomposition of carbonates, such as the carbonate of lime, of iron, of magnesia, which enter into the composition of the solid crust of the earth. The common limestone alone exists in such quantities in it as to be able to give out inexhaustible

streams of carbonic acid from every point of the earth's surface, of which this salt, together with silica, forms the greatest part; its geognostical distribution extending from the newest tertiary deposit to the oldest primitive rocks. From its combination with lime, carbonic acid is evolved partly by sulphuric and hydrochloric acids, which exist in the interior of the earth, sulphate and chloride of lime being thus formed; and partly by a simple process of calcination which is continually carried on at a certain depth, in consequence of the heat inherent to the interior. Berzelius believed that the action of the heat, and, therefore, a continued evolution of carbonic acid from limestone, ceased at the depth of two or three fathoms from the surface, in consequence of the very bad conducting power of the stone. But Bischof has proved that if limestone is exposed to a high degree of heat it cannot retain its cohesion and firmness; in fact, under such circumstances, the rock soon cracks in every direction, is disintegrated into fragments, and thereby affords ample room for the continued influence of the heat, which is, of course, assisted by the presence of a large amount of aqueous vapours. This is, only on a larger scale, the very same process which we may every day observe in our artificial lime-works.

In a subsequent communication I intend entering into the physiological effects and the therapeutical action of carbonic acid, both as gas and when dissolved in water.

Art. VII.—*Observations on Encysted Tumours.* By Henley Thorp, M.D., F.R.C.S.I., L.K. & Q.C.P.I., Letterkenny.

During the last ten years I have been called on to operate upon several cases of encysted tumours, and as my experience of these growths, at least as they occur in the orbital region, does not correspond in some respects with Mr. Hamilton's, as published in his memoir in the last number of this journal, I am induced to give a brief account of a few cases, out of many others, which have come under my notice, and to append a few remarks upon encysted tumours generally, as well as upon those which occur in the neighbourhood of the orbit in particular.

Case I.—In the summer of 1853, a farmer, aged 30, consulted me respecting a swelling that occupied the outer part of the left

superciliary arch; it commenced at boyhood and enlarged slowly, was oval in form, about the size of a walnut, and projected downwards so as to occupy the corresponding portion of the eye-lid; the integuments were of a dusky-red colour from a remarkable increase in the number and size of the cutaneous blood vessels; the skin moved freely, but the tumour itself was evidently closely adherent to the subjacent parts; it was also tense, and possessed a certain degree of elasticity as well as fluctuation. A transverse incision through the skin and orbicularis, along the lower edge of the eyebrow, exposed the swelling, which was, in the first instance, detached from its connexions by a process of tearing and cutting—using alternately the handle and blade of the scalpel—at length it was found impossible, from the tumour's tenseness and size, to depress it sufficiently to permit of its separation from the orbital plate, to which it closely adhered; a puncture obviated this difficulty, by emptying the sac, which in a collapsed condition was cautiously dissected from its bony deep-seated attachments, and removed entire; the cyst was thin, but strong, presenting internally a pearly lustre; the contents were semifluid, viscid, and glairy; that portion of the superciliary ridge upon which the tumour rested was rounded off, and presented a blunt depression.

Case II.—James Dogherty, aged 22, a constabulary recruit. There exists at the outer and upper part of the orbit a smooth globular swelling, about the size of a pigeon's egg; it is situated so as to lie for the most part on the frontal bone, but it entrenches also on the upper lid; the outer extremity of the brow crosses the tumour below its centre; fluctuation is tolerably distinct; the integuments move freely over its surface, but it is evidently fixed to the parts beneath; the lid, where it overlies the tumour, is of a purplish red colour, but towards the temporal region the discolouration is not so manifest. The patient states that the swelling has existed for several years, but that its rate of growth has latterly very much increased. The cyst was brought into view by a transverse incision above the brow, and separated from its cutaneous connexions with tolerable facility, when transfixion with a tenaculum enabled me to free it from the periosteum, and dissect it out entire. The bone presented a well-defined hollow, which interrupted the continuity of the temporal ridge close to the external angular process. The cyst contained a finely granular substance, of the consistence of thick cream, and of a pure white colour.

Case III.—William Wallace, aged 6, was brought to me by his father to have a tumour extirpated, which, springing from the cavity of the right orbit below the eye-brow, formed a prominence in the upper lid about the size and shape of a small marble; the swelling, which existed from birth, was smooth and softish, and the skin over it presented no preternatural vascularity or deviation from its natural condition. The cyst was exposed by a horizontal incision parallel with the folds of the lid; it was very thin, and was accidentally punctured, while separating it from the loose cellular tissue around, so that the contents, which were limpid and clear as water, escaped; however, the collapsed sac was seized with an Asselini forceps and completely removed; it had a slight connexion with the orbital plate of the os frontis.

Case IV.—On the 17th of last September, I removed an encysted tumour from a girl named Mary Macklin, it was placed just above the centre of the left eye-brow; was oval in form; about the size of a kidney-bean; presented an irregular surface; felt rather firm; did not fluctuate; was movable, and the skin covering it presented no discolouration or alteration of structure. The sac was exposed in the ordinary manner, and, after transfixion, completely dissected out; it was not adherent to the bone beneath. The contents were a mixture of steatomatous substance, chalk-like material, and short slender hairs.

No surgical subject possesses greater interest than the pathological history of encysted tumours generally—the large size they are capable of attaining—the deep position they occasionally occupy in the visceral cavities, and their strange and unexpected contents invest these formations with an interest not subordinate to that of any others occurring in the organism. Although the mode of origin of growths such as those produced in the ovaries, amongst the abdominal and pelvic organs, at the bottom of the orbit, &c., cannot be explained upon the principles long ago suggested by Sir A. Cooper, the correctness of the views of this distinguished surgeon, as applied to superficial and subtegumentary wens and cysts, can scarcely be disputed; various circumstances connected with the pathology and symptoms of the tumours last referred to demonstrate their character —they are not new growths, but sebaceous follicles distended into sacs, by reason of imperforate or obstructed excretory orifices, and retained contents. Such swellings are commonly met with in situations where the sebaceous glands are largest and exist in greatest

numbers, *e.g.*, on the head, face, and posterior aspect of the trunk; when small, they occupy a position immediately under the skin, or are closely connected with it; on the surface of the tumour, in its early stage, and corresponding with the impervious opening of the duct, a dark point may often be discovered—here a probe can be pushed into the cavity of the follicle, and the contents expressed; its interior is lined with a stratum of epithelium or thin cuticle, and the contents, however heterogeneous, be they limpid as water, viscid as honey, pap-like or fatty, pultaceous or etheromatous, hairs or horns, whether they present under the microscope the appearance of epithelial scales, perfect or disintegrated, fatty particles, crystallized or amorphous or other elements, they are all the secreted products of the internal surface of the cyst, and correspond in every respect with the substances which a tegumentary glandular follicle is capable of furnishing. Facts like these establish beyond all doubt the opinion of Sir A. Cooper as to the follicular origin of encysted tumours, when subcutaneous or superficial. But the fact of such tumours being occasionally congenital—adherent to bone—occupying a position remote from the skin, and separated from it by a layer of muscle, has opposed itself to the unexceptional adoption of the doctrines enunciated in the *Surgical Essays*, and has led to the opinion that certain swellings of this class, although not far removed from the surface, are nevertheless adventitious growths—new formations—differing essentially from the subcutaneous variety. But it does not appear impossible that a body small at first, and connected with the skin, or even developed in its substance, should as it enlarged in size, come to occupy a deeper position, and be detached, in process of time, altogether from its original connexions. Let us suppose a cyst, for example, to originate in the skin, covering the orbicularis palpebrarum, it enlarges in size and presses backwards, gradually the fibres of the muscle separate, and the tumour passes through them until the greater portion of its bulk lies upon a plane subjacent, but, the tumour being globular, the action of the muscle must now of necessity tend to place it in a still deeper position, and finally, by reapproximation of its fibres, to close over and separate it altogether from the cutaneous texture; embedded at length in a loose areolar tissue, in close proximity with the periosteum underneath (which is fixed), and pressed upon in front by the muscular structure of the orbicularis (which is movable), it necessarily contracts adhesion to the former. It is no objection to this explanation to say, that encysted tumours are often congenital—the same causes are in

operation during intra-uterine life as exist after birth—the skin is formed at an early period of fœtal development, and the sebiparous glandules are in a state of great perfection and activity at birth—their orifices are probably as liable to become obstructed during gestation as at any other period of existence, nay more so, from anatomical imperfection—if the anus may be congenitally imperforate why should a follicle not suffer from an analogous abnormity.

In practice, encysted tumours, provided that they have attained a certain size, and have existed for a moderately long period, will always be found underlying the subcutaneous muscles, when these latter present themselves; at least my own experience does not furnish an example to the contrary; and, when a bone lies near, they are very prone to contract an adhesion to it, and indent its surface. No doubt the common wen, when it occupies the higher regions of the head, seldom attaches itself to the pericranium, a fact readily explained by the mobility of the scalp in which it is embedded, and the intervention of the epicranial aponeurosis, the motions of which it is compelled to follow, but within and about the orbit and frontal region, where no such structure separates the tumour from the fibrous covering of the bone, the two will be found more or less intimately adherent.

Although the majority of encysted tumours of the orbital region belong to the variety technically called hygroma—thin cysts with watery contents—it is not to be supposed that this locality is not obnoxious to other descriptions of these swellings. The second case detailed in this communication was an example of etheroma, and the sac possessed by no means an inconsiderable degree of strength and thickness. In cases Nos. 3 and 4 the integuments presented quite a natural appearance. In the third case the tumour was not adherent. In one of the patients, the swelling was more globular than oval; and in the girl Macklin the cyst had an irregular outline, and contained, not a fluid, but a suet-like substance, calcareous matter and hairs. The conclusion, therefore, forced upon me is, that encysted tumours in the neighbourhood of the orbit do not possess *peculiarities*, although they frequently differ in many respects from congenerous swellings of the head and face.

In all operations which interest surfaces so much exposed to view as the eyelids and parts adjacent, a point of no inconsiderable importance is the avoidance of unsightly scars and cicatrices, all incisions here should, if possible, be parallel to the natural folds and ridges of the skin. I have never found it necessary to deviate from

this principle, nor have I ever met with a case requiring a crucial incision; certainly a vertical division of the lid should not be practised if at all avoidable.

Although in removing the tumour great caution is necessary to avoid an opening, it may be advantageous, on certain occasions, after the cyst has been for the greater part isolated (as when the bone is deeply indented, or the tumour sinks far into the orbital cavity), to permit a portion of the contents to escape through a small puncture, the partial collapse of the sac will diminish its size, and thus permit a more distinct view of its deep-seated attachments. In the first case referred to it would have been perfectly impossible to effect the separation of the tumour from the roof of the orbit, were not this expedient adopted.

After the operation sutures are indispensable; the edges of the wound, from want of due support, have a great tendency to become inverted; a few interrupted stitches made with a slender sewing needle and fine waxed thread, with strips of court plaster at intervals, supported by a well-adjusted compress offer the best means of insuring an accurate union; as for metallic ligatures, I have almost renounced them, and I am not ashamed to confess the heresy.

In cases where the total extirpation of the tumour is impossible, from its deep position or intimate connexion with important organs, a secondary growth is very liable, in process of time, to make its appearance. The tumour is said to "grow again;" but this language is inaccurate: no doubt a swelling does grow, but it is an *adventitious one*, engrafted upon the remnant of the former cyst, which, continuing to perform its function as a secreting surface, furnishes an unorganized product that acts as a foreign body, round which the cellular tissue solidifies into a sac. It is thus relapses occur, and hence the advantage of being able to remove every portion of the tumour. When seated in the orbit, if deeply rooted, a cystic growth is one of very serious import, and may easily be confounded with other causes of Exophthalmos;* nor is laying open the sac, and exciting a suppurative action unattended with danger. We must recollect that the periosteum of the orbit is continuous with the dura mater; and further, that a delicate sheath of the subarachnoid cellular tissue

* Several years ago a case of exophthalmos was admitted into the City of Dublin Hospital, under the care of Dr. Jacob. The eye-ball was greatly protruded, the cornea dull, and the lids congested and of a purplish colour. It was decided to extirpate the globe, and afterwards to remove the contents of the orbit, if necessary. The first incision at the outer canthus opened a cyst, which immediately emptied itself, and permitted the eye to resume its usual position.

is continued forward around the blood vessels and nerves that enter posteriorly; moreover, that the ophthalmic is in communication with the cerebral veins through the cavernous and other sinuses. Inflammation may readily extend by any of these routes from the orbital cavity to the brain and its membranes; nor is this occurrence by any means rare. Mackenzie, Wardrop, and other ophthalmic surgeons, give cases. When I read of encysted tumours frequently operated upon, both in London and Dublin, before a radical cure could be effected, I may be permitted to congratulate myself at being more fortunate with my cases.

Art. VIII.—*Some of the Watering Places and other Health-resorts of Switzerland.* By H. R. De Ricci, M.D.

(*Continued from* vol. xxxii., p. 330.)

I was not strictly correct when I asserted just now that the water of Loëche evolves no gaseous products; it does give off about 10 cubic centimetres of nitrogen, and two cubic centimetres of oxygen and carbonic acid gas, in all about 12 cubic centimetres of gases from every 1000 grammes of water, but no sulphuretted hydrogen is evolved until the water has been bathed in, when its presence can unmistakably be detected by the olfactory organs, without the aid of lead test paper; this is supposed to be due to the decomposing action of the sebaceous exudations of the skin on the sulphates contained in the water.

Although Loëche does not offer much in the way of amusements, still its environs are full of beauty and interest. One of the curiosities of the place is the ascent called the ladders, which leads from the valley to the village of Albinen, situated on a high alp on the top of the Wandfluch, on the right of the valley when looking towards the Ghemmi. There is a constant intercourse going on between the inhabitants of Loëche and those of Albinen, but, owing to the precipitous cliffs which hem in the valley on all sides, there is no path by which the natives can communicate except by going a round of nearly six miles, whilst Albinen and the baths are not more than one mile apart; one at the bottom of the valley, the other perched on the top of about 150 feet of perpendicular rock. In order to save themselves this long circuit, the inhabitants have for

centuries been in the habit of scaling this perpendicular buttress by means of ladders placed straight against the cliff, one above the other, fixed to the rock in the most primitive and unsatisfactory manner; the ladders themselves are of the rudest construction, about 12 feet long and three feet wide, the rungs being very far apart, and joggling in their sockets; often rotten—always rickety—they convey to a stranger who attempts to mount them the most unmistakable feeling of insecurity; yet the inhabitants go fearlessly up and down at all times and seasons—day and night—men, women, and children, and accidents rarely happen. It is surprising to see the heavy loads which these people carry up and down those dizzy ladders, and fearful sometimes to watch two parties meeting, one ascending, the other descending, when, in order to pass each other, the least heavily laden leans out over the precipice from the edge of the ladder to make room for the other to pass.

In this neighbourhood the larch grows wild, it is its native habitat, and some of the noblest specimens of that tree are still to be seen there; I measured one 22 feet in circumference, at about five feet from the ground. About the middle of the latter half of the last century, the Duke of Athole imported the larch into Scotland, and it was from the neighbourhood of Loëche (I have been told), that he brought the two original trees which have since covered with their progeny half the mountain sides of Scotland. Travelling was a very different matter in those days from what it is in ours, and the Duke, who was travelling on horseback, is said to have carefully packed the two young sapling larches one in each of his *full jack boots*, so to keep them upright and preserve them from injury. I believe that the original pair of larches which were so brought over from Switzerland, are still to be seen flourishing at Blair Athole.

In what cases, in conclusion, should we recommend the waters of Loëche to our patients? If we were to give heed to all that local bath doctors tell us of the respective waters of their several springs, there is not an ailment which flesh is heir to, that would not be cured by either drinking, plunging, or soaking in either one or all of them. I have been at some trouble to make out, by the aid of Dr. Mengis and Dr. Marc d'Espine, President of the Medical Society of Geneva, a list of those diseases in which the waters of Loëche are truly serviceable, and the following appear to be those in which we may expect the most encouraging results:—

First on the list we may place rheumatism, articular and muscular, and we may probably class with it most forms of myalgia and neuralgia. Many forms of skin diseases, especially eczema, herpes, impetigo, and ecthyma, which are invariably cured; unfortunately the same cannot be said in cases of acne, psoriasis, and pytiriasis, although they decidedly improve under the influence of the baths of Loëche.

In amenorrhœa and dysmenorrhœa, these waters may with safety be recommended, as also in cases of vaginal discharges and bearing down, caused by general relaxation of the uterine apparatus and its appendages—we may add goître, but I fear that unless taken at a very early stage, one would not be justified in expecting any great results. The waters of Saxon, would, I think, be much more powerful in dispersing those disfiguring tumours, were it not for the unhealthiness of the locality where they arise, which, combined with the mosquitoes and the suffocating heat, render them totally unavailable, at least to our British population.

Saxon is situated in the valley of the Rhone, on the left of the traveller coming down from Loëche, towards the Lake of Geneva, about half way between Sion and Martigny. The mineral water which supplies the bathing establishment gushes out more like a little torrent than a spring, and it is an unfortunate circumstance that the unhealthiness of the locality will always prevent us from making use of it, for it belongs to that class of iodo-brominated springs which are so powerful in the treatment of those diseases for which they are indicated. I have not been able to obtain an accurate analysis of these waters, but that they contain both iodine and bromine is easily detected, even without an analysis, by the peculiar saffron-like smell which they evolve on being exposed to the air for a short time. Ossian Henry, in a paper laid before the Imperial Academy of Medicine at Paris, states, that 0·110 grammes of iodide of calcium and 0·041 grammes of corresponding bromide are contained in every 1,000 grammes of the water, thus greatly exceeding in strength the somewhat similar waters of Kreuznach, Wildegg, and Heilbrunn. I once met an interesting young patient, a lady from the north of Italy, who was rushing away from the baths of Saxon, unable to support the heat, the stuffiness, and the mosquitoes of the valley of the Rhone. She had been ordered by her medical attendant to those baths, solely from the account he had read of their chemical composition, and probably without the most remote idea of the topography of the place. She was suffering from struma in a very aggravated form, labouring under caries of

the left elbow, and of some of the metatarsal bones of the left foot. During her short stay at Saxon she had experienced the greatest improvement from the use of the waters, and felt very disconsolate at having to give them up. I endeavoured, however, to comfort her with the assurance that the water she valued so much could be transported in bottles, and employed in the same way, and for the same purposes, at a distance from the spring, and in any healthy locality she might select; for the water of Saxon is *nearly cold*, and it is notorious that cold mineral waters bear exportation better than those which rise at a high temperature. This lady, at my suggestion, selected Champery, not far from the baths of Saxon, where I also was going to spend a short time, for her summer quarters, and I thus had the opportunity of watching her, and studying the effect of those waters at a distance from the spring, but with the adjuvants of bright clear bracing air, and no mosquitoes. This patient improved wonderfully while under my care at Champery, and though much of the general improvement was unquestionably due to the invigorating effects of the pure air of the place, and the use of a mild chalybeate spring, which rises near the village, and of which I made her take some every day, yet the amendment of the ulcers and the contraction and improved look of the several suppurating surfaces was undoubtedly due to the waters of Saxon, with which I kept them constantly wet by means of linen compresses. I think I can safely assert this, for whenever the Saxon water happened to be run out, and that I dressed with plain spring water, the granulation became flabby, the discharge unhealthy, and the smell intolerable.

Between Saxon and Villeneuve, and precisely at the point where the Rhone has to force a narrow passage for itself between the mountains of the Dent du Midi and the Dent de Morcles, lie the baths of Lavey; they are much frequented by the Swiss themselves, and by French and Germans, but I do not think that they will ever attract many from these countries, as they labour under the same disadvantages as the baths of Saxon, though in a minor degree. The water of Lavey is sulphurous, but not to a very high degree; it contains lime, potassa, soda, and strontian, and 100 cubic centimetres give of

Nitrogen, ...	27·80
Carbonic acid, . .	4·34
Sulph. hydrogen, . . .	3·51

It does not spring forth, but has to be pumped up from under the

bed of the Rhone, and thence conveyed in pipes to the baths, losing in its course a considerable portion of its gaseous components and much of its heat, so that while at the source itself it is pumped up at a temperature of 43° centigrade, it has to be warmed over again at the establishment, and by that means loses still more of its constituent gases.

In the vicinity of Lavey are the salt mines of Bex, which are well worth a visit. The principal gallery runs straight into the mountain for about 1¼ mile, with an average height of eight feet and five feet in width. At 400 feet from the entrance is a round chamber, excavated in the solid rock, and used as a tank for dissolving the rock salt. It is eighty feet in diameter and ten feet in height, the immense vault of rock being totally unsupported in its entire extent. The extraction of the pure table salt from the solutions of rock salt is carried on exactly in the same way as at Kreuznach, in Germany, and the mother-water, *mutter-laüge*, which remains after the salt is crystallized, is employed at the baths of Lavey to strengthen the mineral water, the same as at Kreuznach, by a certain quantity of it being added to each bath, according to the requirements of the case, and the directions of the resident physician. The most important ingredients of the mother-water from the salt factories of Bex are, bromide of sodium and bromide of magnesium, about 8 grammes of the former and 2½ of the latter to each kilogramme of *mother-water*. The quantity of this *mother-water* added to each bath of Lavey mineral water is about 2 litres at the commencement, and gradually increases to 30 and 35 litres for each bath. This quantity is seldom exceeded, nor long continued, and is gradually diminished until reduced to the original 2 litres with which the patient had commenced.

The waters of Lavey enjoy a great reputation in Switzerland for their efficacy in the treatment of scrofulous and rachitic diseases; they are also said to cure goître and some cutaneous affections. I have little doubt that they principally derive their curative powers from the bromides of the mother-water, which is added to them, though no doubt the combination of them with the sulphuretted water will render it more efficacious in the treatment of those skin diseases which it is said to cure.[a]

[a] It appears to me that we might take a practical hint, from the *plan* followed in other places, of strengthening feeble mineral waters by the addition of the residual waters of salt refiners, and employ some of the *mutter-laüge* of our own salt factories, either diluted with plain water, or with water containing, like that of Lavey, a small proportion of sulphurates, and apply it in the form of baths in the treatment of cutaneous disorders and rheumatic affections.

I mentioned above, that a young lady, suffering much from scrofula in an aggravated form, had derived much benefit from her sojourn at Champery. I think this place deserves more notice than has hitherto been bestowed on it, not as a bathing place, but as a *health-resort* for the summer months. I do not recommend it to those who seek for *pleasure* in the excitement of the gaming table, for, alas, there is no Casino, no Kur-saal, at Champery! But for those who can see beauty in the ever-varied works of the Great Architect—the pine-clad slopes, the towering rugged rocks, the foaming torrent, or the still solemn wilderness of the glacier—Champery will offer much enjoyment. It is situated nearly at the top of the Val d'Iliers, a valley stretching up towards the mountains of Savoy, from the left bank of the Rhone, about midway between the baths of Lavey and Villeneuve. Champery is about 4,500 feet above the level of the sea, and beyond the region of *mosquitoes;*—this invaluable quality can only be fully appreciated by those who have felt what *insects are;*—to those who do not know them, I recommend one night at Martigny in the month of July or August. Champery is situated on the western slope of the valley facing the fantastic profile of the Dent du Midi. It has good accommodation at a reasonable cost. It is admirably situated for mountain excursions, from the easy ride to the Croix de Cullet to the more arduous ascent of the Dent itself, whose principal peak rises to about 11,000 feet. Another great advantage it possesses, is in not being yet hackneyed; the people about the place are unsophisticated; and it is refreshing to find oneself in Switzerland, at last out of the universally beaten track, and for a time relieved from that human flood which, by degrees, is converting that glorious country into an overwhelming Cockney watering-place.

Not far from Champery, in the midst of a wilderness of pine trees, is Morgins; it is reached by a track—I can scarcely call it a path—which leaves the road from Monthey to Champery, on the right of the traveller going up the valley. It possesses an hotel of the most primitive kind; but many Swiss resort to it yearly for the purpose of inhaling the forest air, which, passing over the stems of the fir trees, all encrusted and dripping with resinous exudations, becomes charged with their odours and exhalations, and in the curative powers of which, especially for bronchitic affections, the Swiss place great reliance. I met there a most intelligent lady, who during many years had suffered from a chronic form of bronchitis, with excessive secretion; she passed her winters at Montreux,

on the Lake of Geneva, and the summer in the mountains, now in one place and now in another; but for the last three summers she had come to Morgins, in consequence of the great benefit she had derived, as she expressed herself, from breathing the air charged with turpentine. At the time, this account did not make much impression on me; but having read, since my return, that interesting and excellent monograph of Dr. Corrigan's on Arcachon and its pine forests, I was forcibly struck with the similarity, and I now place faith in the accounts which I received of the curative effects of the air of Morgins. But not only those who suffer from bronchitis and other pulmonary affections, are said to derive benefit from a summer residence among those pine forests; chronic ophthalmia is often cured, and always relieved; and also many other forms of disease resulting from abnormal conditions of the mucous membrane.

The Swiss, not satisfied with inhaling the balsamic air of these forests, and leading at the same time the most regular and healthful life, endeavour to add still further to their manifold advantages by taking what they call the whey cure; this consists in deluging their insides with enormous quantities of the whey which remains after the manufacture of goat cheese. This whey, of which they take from 6 to 12 tumblers with the greatest gusto before breakfast, was to me the most nauseous dose I ever encountered; they drink it tepid, allowing a quarter of an hour between each dose! but one taste was sufficient for me. As for any advantages to be derived from it, excepting in so far as it acts daily as a purgative, I can see none, and as whey is nothing more than milk minus its nutrient properties, I am inclined to think that a bowl of the pure milk, warm from the goat, with perhaps the addition of a lump of sugar, and a table spoonful of rum or kirchwasser would, in all probability, have been of far greater service to invalids. The great place for the whey cure is Gais, in the Canton of Appenzell; but wherever the Swiss, French, or Germans resort for the summer, if there is a goat to be had at all, its lucky possessor is sure to convert its milk into whey.

Another favourite cure in Switzerland is the grape cure; and of this I beg to speak with far more respect. In the first place it is, unlike the last-mentioned remedy, very pleasant to take, and in the second instance it is of real service. Grapes will not cure consumption as some have asserted; but I have seen it do a wonderful deal of good in cases of marasmus, brought on by habitual intemperance and indulgence in all sorts of excesses. I have seen persons

who *looked as if consumptive*, gain flesh and strength under the use of large quantities of grapes, and a friend of mine—a highly intelligent individual, who on several occasions had to take cod liver oil in this country, not for any pulmonary complaint, but for general debility and wasting away—assured me that after eating for several days from two to three pounds daily of grapes she felt invigorated exactly in the same way as if she had taken cod liver oil for the same lapse of time. I would always recommend any patient that I would send to Loëche, to adjourn to Vevey in the commencement of September, after having undergone the ordeal of those baths; and at Vevey to finish the treatment by going through the process of the grape cure, than which no cure can be more simple. The grapes are delicious, especially if you take care to purchase only such as come from Aigle, and the cure consists in eating as many of them as you can manage! the first thing in the morning—the last thing at night—at breakfast, luncheon, and dinner; and I never knew a patient to tire of them, nor resist their fattening properties.

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PART II.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

Observations in Clinical Surgery. By James Syme, Professor of Clinical Surgery in the University of Edinburgh. 8vo, pp. 217. Edinburgh: Edmonston and Douglas. 1861.

"It is my intention," says Professor Syme, in his preface, "at no distant date to publish some further illustrations of the principles I am accustomed to teach." We earnestly hope to see this intention carried out, as, in so doing, the distinguished Edinburgh Professor will unquestionably give to the world, in the results of his experience, a work not inferior to anything that he has already done. Surgical cases, truthfully detailed, will never lose their interest in the eyes of practical men; and although the observations of Mr. Syme, and the doctrines which he lays down with so much authority, will not, nor ought not, to pass unquestioned; yet, we doubt not, that they will be considered with all the respect due to an individual who has devoted his life, with so much earnestness and success, to the cultivation and advancement of the science and art of surgery.

The present volume of observations in clinical surgery consists of thirty-five short essays on surgical topics, with illustrative cases. It is obvious, therefore, from the very nature of the work, that it would be impossible for us to give anything like a critical analysis of it, and that the reader must, in the pages of the work itself, seek out the views of the author on many of the subjects, from among which we can but select a few.

Fracture of the Thigh Bone.—Mr. Syme starts by boldly announcing that there are few principles more entirely erroneous than that extension is essential for the successful treatment of a fractured thigh bone. This, indeed, he long believed, but is now convinced that it is equally unsound in theory, and opposed to good practice.

"When it is recollected," he says, "that tension is the proper stimulus to muscular contraction, the evils resulting from it will not appear so surprising as that any one should so far forget his physiological principles as to engage in it. Instead of exciting the muscles to contract, by subjecting them to extension, the great objects in treating a fracture should be to place them at rest, and, by protecting them from all sources of irritation, to oppose their contractile action. To accomplish this, the prevention of motion is of most consequence, and hence arises the great value of Mr. Potts' improvement in the construction of splints, (and, better still, Desault's splint acts on the same principle,) by preventing any of the articulations from moving, and keeping the whole limb in a state of perfect quiet."

"In treating a fracture of the thigh bone, the first step should be to draw out the limb to its proper length, direction, and shape; and, if this cannot be done readily, on account of the patient's involuntary resistance, it may be accomplished through the aid of chloroform. Two splints of wood, leather, or pasteboard, the full length of the thigh, from the trochanter major on one side, and the perineum on the other, to below the knee on both sides, are then to be applied, and secured by four or five looped bandages, and, lastly, the long splint, wrapped in a sheet or table-cloth, of which enough is left free for covering the limb, being placed by the patient's side; the loose portion is brought over, and fastened to the board, after which, by means of the perineal and ankle bands, together with one round the body, the whole apparatus is rendered secure."

Mr. Syme then gives the general result of this mode of treatment, as seen upon sixteen cases of fractured thigh occurring in his wards, from September, 1859, to March, 1861. The entire sixteen were treated without extension. In one of them there was shortening to the extent of one inch, owing to the complication of an oblique fracture of the leg; in another, the limbs were found to be of precisely the same length; while, in the remainder, the shortening varied from a half to three quarters of an inch.

Ununited Fractures.—With reference to the treatment of ununited fractures, Mr. Syme lays great stress on preventing, as completely as possible, all motion of the part affected. He has been long satisfied that the expedients in ordinary use, or, at least, usually recommended, such as rubbing the broken ends together, stirring up their connecting medium by the introduction of needles,

or passing setons through it; if they were ever found to prove successful at all, did so, not from their own direct agency, but from the enforcement of rest conjoined with their employment, which would have been equally efficient, although not associated with other remedial means. He contends that, under ordinary circumstances, the accomplishment of osseous union will take place, if the parts are kept perfectly free from motion by the proper application of splints. To effect this, is, however, often by no means an easy matter; it will be necessary to envelop the entire limb in a firm case of starched pasteboard so as to lock in immobility all its articulations. If, however, the morbid condition is too firmly established to admit of being remedied by this treatment, Mr. Syme does not hesitate to resort to what he pronounces emphatically to be the only other means really capable of overcoming the difficulty: this is cutting off the ends of the broken bones together with the ligamentous substance connected with them, so as to obtain two osseous surfaces, which may be placed in the proper relation to each other, and steadily maintained in it by the rigid pasteboard case.

"CASE.—J. H., aged 34, a private of the — foot, while discharging some duty in the Redan on the 8th of September, 1855, after the occupation of Sebastopol, was blown up by a Russian mine which had escaped detection, and, in addition to some slighter injuries, sustained a fracture of the left arm, between two and three inches above the elbow. He walked up to his regimental hospital, where splints were applied and retained for a month, when, there being no signs of union, the ends of the bone were rubbed together and supported by a starched bandage. He left the Crimea on the 3rd of February, and was sent to the hospital at Renkcioi, where a seton was passed through the seat of fracture, and retained for five weeks without any benefit. On the 20th of May he proceeded homewards, and after a long voyage of nearly two months arrived at Portsmouth, whence he was transferred to Chatham on the 17th of July. No attempt to restore rigidity was made there, and at the end of two months he was dismissed the service with a pension of one shilling per day in consideration of his disability, which was regarded as equal to the loss of a limb.

"In the hope that relief might still be afforded, he applied to me on the 22nd of January, 1857, nearly 14 months from the date of the injury, and finding that the arm was entirely useless, through the extreme mobility of the ends of the bone, which overlapped each other to the extent of more than an inch, I resolved to adopt the only procedure that,

in my opinion, afforded any reasonable prospect of remedy under such circumstances, which was, to remove the ends of the bone, and afterwards maintain the most perfect rest, by placing the whole limb under restraint. Proceeding with this view, my first step was to have the arm put in an easy position, with the elbow bent at a right angle, and then covered from beyond the shoulder to the tip of the fingers with pasteboard and starched bandages, so as to form a case, which, when it became dry, effectually prevented the slightest movement in any of the joints. This case was next cut up on one side from end to end, so as to allow the arm to be taken out of it and undergo the requisite operation, which was performed under chloroform. An incision having been made along the outer edge of the triceps, I exposed the upper end of the bone, and sawed off a portion of it sufficient for obtaining a complete osseous surface. The lower end, lying anterior to the shaft, could not be subjected to the saw, but was removed to the extent of more than an inch by cutting pliers. The arm was then supported by a couple of splints, and the patient lay quietly in bed for a fortnight, when the limb was placed in its pasteboard case, in which an aperture had been made over the wound, then nearly healed, and discharging a very little matter, that soon ceased entirely. The patient feeling that the slightest motion was impossible, even if he had wished it, was relieved from any further restraint, and no longer remained in bed. At the end of a month, or, altogether six weeks, from the date of the operation, which was performed on the 30th of January, the limb was examined and found to be quite straight, with a firm osseous union, so that the patient was able to leave the hospital, not only with his comfortable pension, but also with a perfectly useful arm."

Formation of new Bone.—When speaking of this, we are glad to find Mr. Syme admitting the important practical fact which pathology and physiology have long since taught, although practitioners have been slow to recognise and admit it, that the periosteum is the principal nidus for the formation of new bone. "New bone," he says, "may be formed to a certain extent by growing out from the surface of the old one, so as to lessen the size of an aperture, such as that made by triphining the skull, or diminish the distance between the extremities where there has been loss of substance in one of the long bones; but when produced copiously, as in a case of necrosis, where there is complete restoration, its formation certainly takes place in the periosteum, any deficiency in which curtails its production to a corresponding amount, and hence the irregular apertures observed in a new osseous shell during the period of its formation, which, in the language of

necrosis, are called *cloacæ*, and were formerly attributed erroneously to the effect of absorption induced by the presence of confined matter."

Amputation of the Ankle Joint.—Mr. Syme objects very strongly to the so-called "improvements" made upon his operation at the ankle, and he urges upon those who would desire to perform this amputation with success, the necessity of not taking directions as to the true method of performing it at second hand.

"The surgeon of a large hospital told me that, having heard of amputation at the ankle, he had performed the operation repeatedly, according to the direction of a London surgical manual, with the invariable result of sloughing, but that then, being advised by a friend to look into my own book, he had altered the procedure with constant success. . . . . In performing the operation, the foot being held at a right angle to the leg, the point of a common straight bistoury should be introduced immediately below the fibula, at the centre of its malleolar projection, and then carried across the integuments of the sole in a straight line to the same level on the opposite side. The operator having next placed the fingers of his left hand upon the heel and inserted the point of his thumb into the incision, pushes in the knife with its blade parallel to the bone, and cuts close to the osseous surface, at the same time pressing the flap backwards until the tuberosity is fairly turned, when, joining the two extremities of the first incision by a transverse one across the instep, he opens the joint, and, carrying his knife downwards, on each side of the astragalus, divides the lateral ligaments so as to complete the disarticulation. Lastly, the knife is drawn round the extremities of the tibia and fibula, so as to expose them sufficiently for being grasped in the hand and removed by the saw. After the vessels have been tied, and before the edges of the wound are stitched together, an opening should be made through the posterior part of the flap, where it is thinnest, to afford a dependent drain for the matter, as there must always be too much blood retained in the cavity to permit of union by the first intention."

Mr. Syme, eulogises his operation very highly on account "of its facility and simplicity;" we must confess, that we do not, by any means, consider, that its chief merit lies in its facility of performance; even upon the dead subject, and done in strict accordance with Mr. Syme's directions, very frequent repetitions of it do not justify us in regarding it as other than a tedious operation. It has, however, other great and incontestible merits which, in our judgment, render it more advantageous, in the majority of cases, than any of the "improvements" upon it suggested by others. That,

however, there are cases for which, the modification of Professor Pirogoff, of St. Petersburgh, is well suited, we cannot doubt. In certain injuries of the foot, in attempting to retain part of the os calcis, one is not running risk, as in cases of disease of the bones, of retaining a portion of the osseous tissue, justly liable to the suspicion of relapse. We are not, in fact, by the arguments of Mr. Syme (vigorously put, no doubt), at all convinced, that the adoption of this modification is to be regarded as a certain sign of lax surgical principle.

Diseases of the Rectum and Anus.—It is indeed, very true, that a surgical case is read with interest by practitioners, not merely on account of its individual features, but, because it illustrates the effect of treatment, and enables them to determine the value of practical principles for their own guidance. In no part of Mr. Syme's book, is one more struck by the force of this, than in perusing his cases of diseases affecting the rectum and anus:—Spasmodic stricture, and fissure of the anus, fistula in ano, internal hemorrhoids, and prolapsus ani, hemorrhage from the rectum, being each illustrated by cases which are made the subject of sound practical comment. Most writers have hardly noticed any other cause of hemorrhage from the rectum, save that arising from the occurrence of internal piles; Mr. Syme, however, has met with, and details, some cases of profuse and obstinate bleeding, where there was not the slightest trace of internal hemorrhoids. That pendulous flaps of skin, says Mr. Syme, hanging round the anus, should give rise to a serious flow of blood, seems, in the highest degree, improbable, and might, indeed, be deemed altogether incredible, were it not proved beyond the possibility of question, by well ascertained facts. As to how the presence of external hemorrhoids causes bleeding from the bowel, no attempt at explanation is offered; the facts, however, because we do not see how to explain them, are not the less important in practice, more especially, as Mr. Syme tells us, that he does not regard such cases as being of, by any means, infrequent occurrence. Another source of hemorrhage from the rectum which he speaks of, and which could not have been readily suspected or anticipated, is spasmodic stricture. The fissures and ulcers which are so frequently connected with this condition, usually discharge a little blood, although hardly in such a quantity as to constitute a prominent feature of the case; but, independently of any such complication, a mere contracted state of the sphincter may occasion the most profuse and serious bleeding; as an instance of this, Mr. Syme

mentions the case of a gentleman, a student of medicine, who complained of bleeding at stool, but who, on examination, was found so perfectly free from hemorrhoidal disease, that he was supposed to be labouring under a delusion. Some time afterwards he became extremely pale and emaciated, and Mr. Syme learned from a companion, who resided in the same house with him, that there was really a copious discharge of blood, which issued in a fluid state and then coagulated. On making another examination, it was found, that the external part of the sphincter was tightly contracted; this being judged to be the cause of the bleeding, a division was made of the tight muscular fibres. This had the desired effect, no blood was afterwards discharged.

"There is still another source of hemorrhage from the rectum, of which, I have met with only one example. The patient was a young lady, whom I saw along with the late Dr. Graham, the Professor of Botany. She had lost so much blood as to excite attention, by her altered appearance, and was brought from the country in quest of relief. I could not detect any hemorrhoidal disease, or any other recognised derangement, but observed, that when expulsive efforts were made, the blood issued from a small round orifice, apparently seated in a varicose vein. To this point I applied a ligature, with the effect of affording complete relief."

We have now given enough of extracts from Mr. Syme's work, to place before our readers the form and general plan followed by the author. As to its peculiar merits, and what appear to us, its faults, we feel it would be presumptuous to speak in the language of ordinary criticism. The long-acknowledged and justly great reputation of the author, places him beyond the reach of this. That a person in the position, and who has attained the eminence of the Professor of Surgery, in the University of Edinburgh, should, as he has done, and promises to do, set forth his views, and give to his juniors the benefit of his vast experience, is, in itself, a proof not only of his love of his profession, but of his earnest desire to establish what he believes to be true, and to spread the knowledge of those principles which have made him a singularly useful and successful practitioner. It yields unequivocal evidence of sincerity of purpose and of a nature elevated above all sordid professional ends. Holding this opinion of Mr. Syme, believing that, when he writes (as he has not unfrequently done), with great acrimony, he does so with the intention of attacking vigorously, what appears to him

to be false, we regret that he does not show more readiness to acknowledge in others the same truth-seeking earnestness which we recognise in him; without, at the same time, by any means, agreeing in many of his dogmas. Enthusiasm and toleration rarely go hand in hand, least of all, perhaps, in Scotland; hence, we must excuse the cuts occasionally made at his neighbours "on the southern side of the Tweed;" his exposition of blunders or malpraxis, witnessed in the "metropolitan hospitals of a neighbouring country;" while we do not think that there is anything more than a little natural self-glorification in the publication of Mr. Bransby Cooper's letter, giving Sir B. Brodie's, Mr. Travers', and Mr. Caesar Hawkins' opinion of Lord ———'s case, in which Mr. Syme subsequently obtained so distinguished a triumph.

These characteristics, however, detract little from the real merit of the book, for which the thanks of the profession are, indeed, due to the distinguished author.

Des Hallucinations, ou Histoire Raisonnée des Apparitions, des Visions, des Songes, de l'Extase, des Rêves de Magnétisme et de Somnambulisme. Par A. Brierre de Boismont, M.D. Troisième édition. Paris: Baillière. 1862. 8vo, pp. 718.

On Hallucinations, or A Rational History of Apparitions, Visions, Dreams, Extasy, the Dreams of Magnetism and of Somnambulism. By A. Brierre de Boismont, M.D.

The work of M. Brierre de Boismont, a third edition of which lies before us, has long enjoyed a high reputation, partly due to the exceeding great interest naturally belonging to the subject, and perhaps as much to the admirable manner in which the distinguished author has achieved the task, for which his learning and industry so well qualified him. The former editions were not noticed in our pages; and we therefore regret that space will not admit of our going as much into detail as would be desirable, to give our readers an adequate idea of the excellence of this important contribution to psychological medicine. Our efforts shall be directed more to cull from its pages, than to enter upon the task of elaborate criticism, and to thus excite curiosity and induce a desire to peruse the whole. Before commencing the history of

hallucinations, our author observes that false perceptions were noticed by the ancients, and that they even distinguished hallucinations of sight, of hearing, and of odour. The definition of hallucinations is referable to remote antiquity, but to Arnold may be attributed the credit of having proposed one which is almost complete. After quoting the definitions of Arnold, Crichton, Esquirol, Calmeil, and others, he gives his own, which we may best transcribe in the original words, "*l'hallucination*, la perception des signes sensibles de l'idee; et *l'illusion*, l'appreciation fausse des sensations réelles."

The word hallucination, in scientific language, is applied, in general, to that mental condition in which the individual (to use the words of Arnold), imagines he sees, hears, or otherwise perceives, or converses with persons or things, which have no external existence to his senses at that time. The second chapter is devoted to the consideration of hallucinations compatible with the possession of reason; and, it abounds with the most remarkable instances on record, derived from various sources. We may extract a few of the most interesting. Some of these hallucinations are of the most pleasurable character:—Take, for example, the case of a "Savant," who had lost, soon after marriage, a wife, ardently beloved, but who, many years after the tomb had closed upon her, was present to his sight in all the majesty of her beauty, when, on returning to his country house, he placed himself in the vicinity of a spot she was in the habit of frequenting. How different would have been the sad reality, when age had bereft the once fair form of every charm which, in by-gone days, had so captivated him—

> "And the loved forms, he never more must meet,
> Are with him in the vision, fair as when,
> Long years ago, they clasped his hands at parting."

The letters on Natural Magic, by Sir David Brewster, and the History of Demonology and Witchcraft, by Sir Walter Scott, afford examples of the most wonderful hallucinations. In the case of Nicolay, communicated to the Royal Society of Berlin, we have the subject of the hallucinations himself, studying and analysing his sensations, and assigning the appearances of the spectres to a lesion of the cerebral circulation.

The effect produced by apparitions, varies in different cases. Nicolay became familiar, as it were, with them, and they caused him little disquietude; whereas the distinguished person, whose

history was communicated to Sir Walter Scott by an eminent physician, died a prey to the agony which harassed the last years of his life.

A state of weakness, convalescence, and the prodromal symptoms of asphyxia, are occasionally productive of hallucinations. Leuret, himself a physician, relates a strange hallucination in his own person:—He was attacked by influenza, and he was bled; after which he became weak, but without losing consciousness, and he remained so for eight hours. He distinctly heard a flask placed on the table beside him, and, immediately after, a crepitation as if an acid was poured on a carbonate; he supposed, at first, that an acid had been spilled on the marble table. Having satisfied himself that he neither dreamed nor was delirious, he came to the conclusion that he had been deceived by an hallucination.

Andral was the sport of a strange illusion, when, labouring under indisposition, he perceived a dead body for some moments in his chamber.

Our lamented friend, Sir Henry Marsh, related to us, many years since, an interesting example of an illusion of which he was himself the subject. Early in his professional life, he devoted himself with much zeal to the investigation of the phenomena of fever, the results of which he published in the 4th vol. of the *Dublin Hospital Reports*, under the title of "Observations on the Origin and Latent Period of Fever," a memoir which proved that he possessed in a high degree those qualifications which enabled him to attain the foremost rank in the profession of medicine. While engaged in close attendance on the sick, Sir Henry Marsh contracted the fever which then prevailed as an epidemic. He was attended by Dr. Cheyne, and, for a considerable period, while labouring under the disease, whenever Dr. Cheyne entered the room, he saw a second figure, resembling in the most minute particular his friend, Dr. Cheyne. The two figures—one, the real man; the other, as it were, an impersonation of him—were before him. He was all the time perfectly aware that the second figure was a phantom of his brain, which had no existence but in his disordered imagination.

In Abercrombie's *Inquiries Concerning the Intellectual Powers*, there is mention made of a man who had been all his life a prey to hallucinations. When he met a friend in the street, he did not know, at first, whether it was the veritable person, or a phantom; but he was soon able to distinguish, by the sense of touch, or by listening for the noise of the footsteps. This person had, moreover,

the power of recalling the creations of his imagination by an effort of will.

M. Brierre de Boismont, under the head of hallucinations compatible with the possession of reason, refers to many tales, which, we fear, are either altogether apocryphal, or belong to the category of hallucinations of the insane. The visions of Constantine, of St. Genevieve, and of another maiden, who, coming ten centuries later, was a second saviour of France, are alluded to.

Passing from ancient to comparatively modern times, we have the hallucinations of Oliver Cromwell, of Descartes, Malbranche, Pope, Byron, Göethe, Bernadotte King of Sweden, &c., &c.

M. Brierre de Boismont next proceeds to consider hallucinations in connexion with illusions, and rightly observes, that the study of the former should not be separated from the latter. He then gives the differential character first established by Esquirol: in the case of hallucination, the absence of any external form; while, for the basis of illusion, there must be some sensible object. A man affirms that your figure is that of a cat, or of Napoleon; he is the subject of illusion Another, who, in the night time, hears voices which speak to him, and perceives personages which no one else can discover, is under the influence of hallucination. The privation of sight and of hearing is no preventative to hallucinations, whereas it is an obstacle to illusions.

M. Dechambre, however, thinks Esquirol is not justified in making the distinction. The person who, under the dominion of an hallucination, believes that he hears voices, which speak, and the person who, under the influence of illusion, having a friend before his eyes, believes that he sees an ox or a devil with horns, present no fundamental difference; for in one, as in the other, it is the brain which is diseased, and not the organs of sight or of hearing. That illusions frequently exist with hallucinations, and that they mutually pass one into the other is matter of every-day experience.

M. Brierre de Boismont persists, notwithstanding the opinion of Calmeil, Aubanel, and others, in considering the two orders of phenomena as distinct, chiefly from the fact before referred to, viz., the necessity for the presence of an object in illusions, and its absence in hallucinations.

It is familiar to most people that illusions are compatible with perfect sanity, but that such are easily corrected by the power of reasoning. Should such false impressions be called illusions?

Dr. Forbes Winslow observes: "As long as the judgment

retains the power of correcting the false impressions made through the sensuous organs upon the brain, the notices thus conveyed to the mind cannot, in scientific phraseology, be called either illusions, delusions, or hallucinations; but they become so when they are extravagant and unreasonable in their character, and the judgment ceases to operate in rectifying the false ideas, and the conduct of the individual is evidently influenced by them."

Some false impressions are easily corrected, and are well known to all: such as, for example, a square tower appearing to be round, when viewed at a distance, &c., &c.

There are others, however, the veritable cause of which has only been appreciated in later times, owing to the progress of science: such as the optical phenomenon of the Hartz Mountains; the Giant of Brocken; and the phenomena of like character observed in Westmoreland and other mountainous countries.

Many circumstances give rise to illusions, of which ignorance is, doubtless, the chief. The traditions met with in different countries are, in a great measure, due to illusions of sight.

The following anecdote, told by Dendy, proves that an event which has made a powerful impression, aided by an association of ideas, may produce an illusion:—" Some days after the execution of the Prince of Moscowa, an evening party was assembled at a house in Paris. The servant, whose duty it was to name the guests as they arrived, hearing the name of the M. Maréchal aîné, announced M. le Maréchal Ney. An electric shock pervaded the whole company; and the narrator declares, that the resemblance to the Prince was, in his eye, for a second, as perfect as if it were reality."

Many of the tales recounted in ancient times may be explained on the supposition that illusion of sight or hearing was the proximate cause. Our author refers to the story of Ajax attacking the swine, of king Theoderic, of Bessus, &c., &c. Illusions of sight and hearing have sometimes assumed an epidemic form. The fate of battles have been decided by illusions according to ancient history. During the battle of Platea the air resounded with terrible cries, which the Athenians attributed to the god Pan, and thence, according to some, the word panic.

Touching the frequency of hallucinations among the insane, according to Esquirol 80 per cent. are subject to hallucinations: this our author looks upon, with reason, as too high a calculation. It is among monomaniacs that they are most frequent. Marc observed a man who, from reverse of fortune, had become melan-

cholic ; for many years he had not spoken a word, his sole occupation consisted in smelling and licking the walls. On one occasion the superintendent, without appearing to remark him, asked what had caused the dirty marks and depressions on the wall. The silence which had existed for years was broken, and he exclained "Do you call those dirty marks—do you not see they are oranges of Japan ?" What delicious fruits, what colour, what odour, what an admirable taste ! and with redoubled ardour he applied himself to his task ; henceforth, instead of looking upon him as one of the most unhappy inmates of the asylum, it was evident that his delightful hallucinations of sight, of hearing, and of smell, were the means of procuring for him endless enjoyment.

Hallucinations of hearing are the most frequent by many degrees, and the privation of the sense is no obstacle, as persons who were deaf have held long dialogues with imaginary beings. The invisible speakers may be internal or external. The voices may come from the heavens, from a neighbouring house, from the corners of the room, &c., &c. ; they may emanate from the head, from the belly, or some other part. Hallucinations of hearing may be simple, or combined with those of sight and the other senses. In all times, and among all people, hallucinations of sight have played an important role ; to them are particularly attached the name of "Vision," and to the affected, "Visionaries." In ancient times, and in the middle ages, the belief in visions was general. Hallucinations of hearing, and of sight, are often united ; as in a remarkable case of a man who held frequent communications with denizens of the other world, conversing with Moses, dining with Semiramis and being on intimate terms with Richard the Third. On being asked if he had questioned Richard on the subject of the murders he had committed, and what answers he had given, he said—"What you call murder or carnage is, in reality, nothing. Cutting the throats of some 15 or 20,000 men does no harm, they pass to a better world and a more perfect state of existence. The man who reproaches the assassin is guilty of ingratitude."

Hallucinations of *touch* are surrounded with difficulties as regards their study ; they are confounded with neuralgias and visceral illusions.

We remember seeing a gentleman some time since who supposed that he was the victim of persons who were perpetually sending electric currents through different parts of his body. He passed

whole days in a boat, as he assured us from the experience of the fact, that while on the sea his enemies had no power over him. Calmei reports the case of a veteran who believed that each night he was nailed in a coffin and transported from Charenton to Vincennes, where a mass for the dead was chaunted in the chapel of the palace; by the same invisible personages he was brought back and placed in his bed. The sensation of flying is very commonly experienced. M. Brierre de Boismont frequently found a literary friend of his with eyes fixed, who exclaimed—"*Je vole, ne m'arrêtez pas.*" When he was restored to himself, he recounted his sensations. This has been reported in ancient times.

St. Jerome says, that he experienced in dreams the sensation of flying above the earth, over mountains and seas. Madame d'Arnim, the friend of Göethe, believed that she flew and hovered in the air. The sensation of hovering was to her a delicious feeling.

Hallucinations of *smell*, like those of taste, are rarely isolated; they are generally associated with those of hearing, of sight, and of touch. Some of the insane experience the most pleasurable sensations, and again there are others who suffer pain from the presence of these hallucinations.

The saints frequently get the credit of diffusing odours with which the perfumes of Araby can scarcely be compared, and devils are believed to spread around the most abominable and disgusting stinks.

Hallucinations of *taste*, are of the most pleasurable or distressing character. Some are engaged in smelling imaginary viands and liquors, in swallowing ambrosia and nectar; others in eating raw flesh, arsenic, &c., &c. We remember a patient who, after eating a good dinner, became suddenly sick, exclaiming that he had been eating human flesh. With reference to the existence of hallucinations and illusions in mania, our author has collected 229 observations. Of this number 178 exhibited these phenomena, and 54 manifested no false perception. There are numerous instances of mania suddenly arising under the influence of an hallucination. A woman saw a friend in a dream, who, at the time, was in Africa; he told her he had perished in combat, and he presented his hand to her, she touched it and found it cold; she awoke with a bound, and she was found to be in a state of mania. Under the domination of an illusion suddenly taking possession of a person, crimes have been committed, and to the psychologist the proof is conclusive, that the individual has lost the power of will, and that, therefore, he is

not accountable, but unfortunately the law does not recognize impulsive insanity. Some maniacs slay, because they think the devil is before them; others, because they obey some commandment. His satanic majesty plays an important part in many cases. A woman once informed her husband that Satan lay with her every night. Of 303 patients labouring under melancholia (monomanie triste of our author), 248 were the prey of hallucinations and illusions, and of these 212 presented all the characters of pain. In general, the apparitions have a hideous and frightful form; sorcerers and devils coming out of hell are frequent, particularly with females.

In some examples of this form of mental aberration, the hallucinations and illusions owe their origin to a real event. The night before a judge was obliged to pronounce judgment in a case, in which one of his friends was the accused; the culprit's wife presented herself to him, and urged upon him every appeal which could move the heart. On finding him inexorable, she fainted, and was carried away dying. The judge did not fail in the performance of his duty; but, the event made such an impression on him, after a little time, as to occupy his thoughts altogether; he believed that he had exceeded his duty, that every one addressed reproaches to him; his life became insupportable, and after an attempt at suicide, he was brought to an asylum.

Although, in general, the hallucinations and illusions in melancholia, are remarkable for fixity and durability, they, nevertheless, in some instances, suddenly, and when least expected, disappear. A man who had abstained for a considerable time from food, because a voice had commanded him not to eat, suddenly returned to his ordinary habits, the voice having ordered him to eat. The reluctance to take food arises, in some cases, from hallucinations on the subject of money.

M. Brierre de Boismont, records 28 cases of puerperal mania, 18 of which presented hallucinations and illusions, and 3 manifested a suicidal propensity.

Dementia is frequently associated with hallucinations and illusions, which may last for years; they may then be, as in other forms of mental alienation, continued, remittent, or periodic.

In that form of dementia, accompanied by general paralysis, hallucinations are present in many cases, but only in its early stages.

The seventh chapter is devoted to the hallucinations of *intoxication*,

using the word in the generic sense, as comprising alcoholic drinks, certain gases, opium, haschisch, &c., &c.; and he observes, that the hallucinations, viz., visions of animals, reptiles, &c., &c., which are observed in delirium tremens, are not peculiar to it, but are met with equally, in the delirium produced by belladonna, datura stramonium, hyoscyamus, &c. In the observations on the effects of opium, our author draws largely from the confessions of an English opium eater.

In the eighth chapter, the hallucinations of catalepsy, epilepsy, hysteria, and hypochondriasis, are described. The following conclusions are arrived at:—

Hallucinations are rare in catalepsy, owing to the suspension of the intellectual faculties. The complication of epilepsy with insanity explains their greater frequency in epilepsy than in catalepsy. Hysteria is often marked by hallucinations, which may be compatible with sanity, or may be associated with mania, monomania, or dementia.

The fixity of the ideas in hypochondriasis, is favourable to the production of hallucinations. In chorea, hallucinations are observed, but principally in the acute stage. They have been frequent in epidemic chorea.

They have also manifested themselves in hydrophobia, in lead colic, and in many neural affections.

The hallucinations of febrile diseases are next brought under our notice. They may, in point of fact, complicate all diseases, or they may be, in some cases, their precursors.

The principal diseases in which hallucinations have been observed are inflammatory fevers, congestions, inflammations, diseases of the brain and its membranes, inflammations of the lungs, lesions of the digestive organs, typhoid fevers, the plague, intermittent fevers, gout, certain diseases of the heart, &c., &c.

We would gladly quote at length from the chapters which follow, in which subjects of surpassing interest are treated with great ability, but we are reminded of the length to which we have already gone. Passing over the chapters on hallucinations in connexion with history and religion, which are replete with information conveyed in the most attractive form, we shall devote a brief space to the subject of the treatment of hallucinations. The first question which is to be considered is that of isolation, or treatment at home. In some cases, separation from family and friends becomes a necessity; and in others, it is not expedient. The treatment is

divisable into physical and moral means ; and, to illustrate the subject, our author refers to cases.

The therapeutic agents which have been found most useful are blood-letting, baths, purgatives, and blisters, to which may be added, occupation and exercise.

In hallucinations with excitement, he has found general baths of six, eight, and even ten hours' duration, with irrigation, of great advantage.

With respect to blood-letting, he mentions one case in which it was productive of syncope, followed by blindness, but not by cure of the hallucinations. The unlucky patient was a physician.

In delirium tremens, with cerebral congestion, thirty leeches, applied along the sagittal suture, were beneficial. A powerful shock, physical or moral, has frequently been productive of the cure of hallucinations.

Medicinal agents effect a cure sometimes; not by their therapeutic power, but by breaking the chain of ideas; as, for example: opium, by producing sleep long protracted beyond the accustomed time. We can only briefly refer to some of the cases. A man believed he was exposed to magnetic influence, and that the magnetizer resided in his belly. With a view to divert his ideas, and to relieve the ailment of his stomach, of which he complained, two large blisters were applied to his legs. His countenance, which had been sad, soon assumed an appearance of gaiety, and, by the aid of the distraction produced by intellectual labours, the cure was completed.

A young lady, who was crossed in love, saw her lover everywhere—in the sky, at one time, and he spoke to her, and she responded. After a week she completely recovered, under the influence of a daily bath of four, five, and six hours' duration, irrigation of the head being employed at the same time.

The cure of hallucinations has been due to violent measures, which, in truth, humanity cannot approve. The douche, in the hands of Leuret, has been successful in compelling the insane to give up their hallucinations, admitting their absurdity. With others, the treatment has not had the same result.

The continued irrigation is far preferable to the douche. It may be practised by a streamlet or a number of streamlets falling for hours on the head, from a watering-pot; after some hours of this treatment, patients have begged to be taken out of the bath, admitting that they had been deranged, but that now they were

cured. A young lady, after two hours of the irrigation, exclaimed to M. Brierre de Boismont: "Monsieur, faites moi sortir d'ici, cette eau qui me tombe comme, une pluie sur la tete, m'est insupportable. Vous l'avez fait parce que j'etais folle, je le sais; mais, Dieu merci, j'ai toute ma raison." Before complying with her request, he asked her what had become of the figure which had pursued her everywhere. She answered that it no longer existed; it was an illusion caused by her fever. In eight days she was restored to her family, perfectly well. Hallucinations of recent origin have been known to cease on the day, or the day following, admission into an asylum, such has been the effect of the mental impression.

Many parts of M. Brierre de Boismont's work have not been touched on; but we trust we have attained our object, namely, to excite an interest in the subject among our readers who may not have devoted much attention to the study of the phenomena resulting from the "mind diseased."

Return to an Order of the Honourable the House of Commons, dated 5th August, 1861, *for Copy of the Papers relating to Quarantine. Communicated to the Board of Trade, on the 30th of July*, 1861. *Blue Book.*

In the 62nd number of this Journal, May, 1861, we gave a lengthened notice of two papers relating to quarantine and quarantine laws, copies of which had been returned to orders of the House of Commons, in May and August of the preceding year, and we then felt it our duty to speak in earnest terms of the arduous and most valuable labour which the "Quarantine Committee of the National Association for the Promotion of Social Science" had performed, in the compilation and digest of the evidence upon which those returns are based; and now we have the satisfaction of bringing before our readers a report founded on the evidence contained in the two parliamentary papers referred to. The present "Return" contains, first, some additional evidence and information respecting quarantine which had been communicated to the Board of Trade; and next, a complete digest of the numerous replies that were received by the committee in answer to the queries which had been issued at the outset of their labours, and which were transmitted to Her Majesty's Consuls, the Governors of Colonies, and

the principal Medical Officers of the Navy and Army on foreign stations. Each of these queries is reproduced and illustrated, in the order in which they stand, by copious details and practical remarks, and the general conclusions to which the committee came are stated, and which they "considered to be clearly deducible from the evidence submitted to them;" the Report then winds up with "a few simple recommendations on certain points of practice most easy of adoption, and whose general adoption would, in our," *the committee's* "opinion, insure immediate advantage." Of the elaborate Report before us, we confess it would be very difficult to give anything like the length of critical analysis to which it is entitled, and we must, therefore, content ourselves by taking up some of the most important of the conclusions at which it has arrived, and glancing, hastily even, over them. Lest, however, these remarks might lead the "committee on quarantine" to imagine we undervalue their labours, we beg to premise the remarks we intend to offer with this assurance, that we hold to the statement we made when reviewing the two first parliamentary papers on quarantine, viz.:—"In fulfilling this arduous task, the quarantine committee have performed a most valuable labour, having alike done good service to the interests of commerce and to the cause of sanitary science." Nay more, we may say, that if this statement were applicable to the former undertaking of the committee, as it surely was, it is even more so to the present, which is a full and practical summing up of the evidence which had previously been collected, and which has been so ably analyzed and digested.

The first inquiries that naturally suggest themselves to any one taking up the subject of quarantine are—what is it? why has it been imposed? and what have been its results? Now to these queries we consider the inquirer will find conclusive answers in the *Report of the Committee on Quarantine;* and we believe that any one who will attentively, and without prejudice, study this Report, will learn that quarantine is a fallacy, based upon very unsound and most unscientific assumptions! That it has been, and is, imposed upon false principles, equally at variance with equity, humanity, and common sense; and that, as might be naturally expected, it has failed in affording that protection from epidemic and contagious or supposed infectious diseases, which it was ostensibly designed and hoped to give: hence its results, as regards protection from disease, are very uncertain, or have been proved to be nearly negative, while the injury to trade and commerce has been positive and

undoubted. On these several points we shall quote some illustrative observations from the Report before us; and first, as regards what quarantine really is.

"Many persons imagine that quarantine is a very simple affair, and that all which is meant or occasioned by it is the detention, for a limited time, and the purification of infected or suspected vessels, with their crews and cargoes, in consequence of the actual or recent existence of a dangerous contagious disease, either on board the vessel, or in the port from whence she sailed. But this is far from the reality. In a large proportion of the cases where quarantine is still imposed in many countries, not only no sickness of any sort has existed in the vessel during the whole voyage, but no instance of the disease, on account of which she is subjected to quarantine on arrival, was known to have existed for a length of time in her port of departure." . . . "In the majority, however, of cases in which quarantine is imposed, its alleged necessity rests upon, not a merely gratuitous apprehension, but upon the ascertained, or the rumoured existence of a dangerous transmissable disease in the port or country from which the vessel has last come."

"All on board, indeed, may have been healthy during the voyage, and may be so on arrival, but the fact of the vessel having come from an infected or suspected locality, is held sufficient to require that she, and every person and thing on board, should undergo a specified detention, for the protection of the public health. The quarantine is directed against the *lieu de provenance*, or port of departure; and this is the reason why it involves all arrivals therefrom without exception, whether sick or well; although when sickness has also occurred on board, the quarantine is usually more stringent than when the vessel has remained quite healthy during the voyage."

The Report abounds in instances illustrative of the preceding statement, and moreover, shows over and over again, that in several countries, Spain and Portugal especially, the imposition of quarantine does not depend upon any supposed or alleged existence of disease in the nations from which the arrivals have come, much less upon any sickness on board; but is evidently enforced from political, and particularly, fiscal motives. In Spain, Portugal, and some of the Italian States the most arbitrary and unequal laws exist relative to quarantine, and these laws are usually stringently enforced; but in France and Sardinia, on the contrary, whose existing quarantine codes are based upon the recommendation of the international conference held at Paris, the quarantines have, for several years, been mild in all cases; indeed the imposition of them at all seems to

depend more upon what neighbouring states demand, rather than on any belief in the protective agency that quarantine affords to the public health; and this statement also holds good regarding the British possessions in the Mediterranean, but if we did not impose in Gibraltar, for instance, nearly similar restrictions to those enforced by Spain, the consequence would be that that country would close all communications with us! And, as stated in the Report—"Were Spain to modify her sanitary restrictions, it would confer a great benefit on Gibraltar."

The Report gives many examples of the want of equity with which quarantine is enforced in several places. Thus, while at Vigo the English packets from Southampton, with clean bills of health, were subjected to quarantine upon some frivolous pretence; "at Malaga, on two very recent occasion, certain authorities and persons of rank arriving from places infected with cholera were admitted immediately. A royal ordinance has been also issued, commanding that troops and military stores coming from infected places, should not be subject to quarantine." Surely such examples as these, and there are several such in the Report, fully confirm the statement we have made—that quarantine is usually imposed or enforced upon false principles, at variance with equity and common sense.

With regard to the results of its imposition, we might refer largely to the several parliamentary papers upon the subject, to show that quarantine has proved quite abortive in affording protection from the plague, yellow fever, or cholera, the diseases against which the most stringent portions of its absurd, often iniquitous, code have been levelled. But we need not do more than quote the following statement from the Report:—

"Many of the consular replies contain strongly expressed opinions of the inconvenience and injury inflicted by the operation of the quarantine regulations in force, while no real security is afforded to the public health of the port or country. There appears to be a general distrust and disbelief in the utility of the system, as at present pursued."

Such, we are satisfied, must be the conclusion at which every intelligent and unbiassed observer must arrive; for nothing can be more certain than this, that every one who has seen or has studied the *modus operandi* of systems of quarantine, must have become impressed with a thorough distrust in their operations, and has been led to feel that the sooner such a gigantic fallacy is nearly, or completely, done away with the better; certainly for our own part we

must say, that after considerable experience of quarantine in several countries, and after witnessing the total failure of it to accomplish the objects for which it was ostensibly designed—the protection of the public health, and the prevention of epidemic disease—we have no hesitation in urging—either its entire abolition, or at least such a modification of its absurd code, diversified in each country according to the amount of ignorance that prevails—that the positive evils which it at presents generates shall not be allowed to continue! Every one, we would imagine, must agree with the conclusion of the committee on quarantine when they say that—"All unnecessary interruptions to international intercourse cause not only great personal inconvenience, but serious commercial loss;" a conclusion at which they have arrived from the ample evidence before them, which showed them that—

"*Great diversity and discrepancy exist in the system of quarantine* pursued in different countries," that—"Much of the practice still in force is certainly uncalled for, as regards the public health, and seems to be retained on fiscal, rather than on sanitary grounds;" again, that—"quarantine restrictions appear to have been sometimes resorted to from merely political motives, and to have been used as a pretext for the annoyance and detriment of other countries;" and one of the committee, Dr. Davy, very pertinently remarks—"It appears to be admitted that the preventive measures adopted by the governments of different states to exclude a contraband trade, have been more elaborate, and organised with greater care, with a view to efficiency, than any system of quarantine hitherto in use, and yet with only partial success; and *this universally!*"

We have said that we imagined every one would agree with the conclusion of the committee which we have just referred to, but we feel we were lamentably mistaken, for one of the members of the committee, and a member also, we regret to say, of the medical profession, has submitted the following most extraordinary comment upon the preceding part of the Report:—"It is much to be regretted," writes Dr. Bryson, "that any relaxation of quarantine should have been made, but more especially in regard of yellow fever and cholera morbus; because, in consequence of the want of proper precaution, these diseases, within the last 30 years, have been introduced into countries where they were unknown before." We really do not know what are "the proper precautions" to which Dr. Bryson refers; if he means to say that the strictest quarantine has ever continued to save any country from the visitation of

cholera, we say, at once, that he attempts to propagate a grievous error, and one too that strikes at the true basis of all preventive medicine; he may be enamoured as much as he pleases with stringent codes of quarantine laws, but we are happy to think that few—very few of the well informed, at least, in these countries—will agree with him in these untenable opinions, but will rather take the intelligible views of the committee, which certainly lead to inferences the very opposite to those he has expressed. The Report speaks as follows:—"It does not appear that those countries in which quarantine restrictions are most rigorous, and are most strictly enforced, have hitherto been more exempt from the visitations of the diseases against which quarantine is chiefly imposed, than other countries where the regulations are more simple and less burdensome;" and Dr. Davey adds, to the preceding, the following comment:—

"And some countries, certain islands in the Archipelago, under Ottoman rule, most exposed, have entirely escaped these visitations"! But it is not, we contend, by the enactment of any system of quarantine laws that epidemic diseases are to be prevented attacking and spreading through a country, nor by the most stringent enforcement of these laws; but by the careful study of sanitary science, and its application to the preservation of health; and we quite concur with the comment made by Mr. Farr—that "I am unable to assume that the introduction of dangerous diseases can be prevented by any quarantine regulations."

The committee having come to certain conclusions from the mass of evidence, the Report is brought to a close by some practical recommendations, the aim being—to amend and utilise, not to discontinue or abolish the existing machinery of action. As a general rule, it is recommended that all vessels which have been free from sickness, and which have no malignant disease on board, and are clean, should at once be admitted to free pratique, no matter from what country the ships may have come. When quarantine detention is deemed necessary from the existence of malignant disease—actual or recent—a careful examination should be made of the vessel, and of all persons on board, by the medical officer of health; the healthy and sick should be separated, the former not being necessarily detained, and the latter removed from the infected ship as soon as possible. These recommendations are humane and judicious, and stand out strongly in contrast with existing practices, and also with some of the notions that are pro-

mulgated as comments upon the Report by one or two of the committee. Indeed, on the whole, the conclusions and recommendations are most important, practical, and in accordance with observation and common sense; such in fact, as we might have expected from the distinguished men who compose the committee on quarantine. The concluding section we highly approve of; it is as follows:—

"It would materially conduce to a thorough knowledge of the subject, and probably to the speedy adoption of a more rational and uniform practice generally, if the government of this country instituted an investigation into the results of quarantine, and the working of quarantine establishments, in the chief ports of the South of Europe and the Mediterranean, where the system is still in greatest force, in order to ascertain the actual truth by personal observation on the spot."

If such an investigation were made by honest and unprejudiced observers, it would be soon discovered that the system, as practised in the ports of the countries referred to, is one which is a disgrace to the enlightenment of the nineteenth century, that it is nefarious, as it is inhumane, is, and has been, utterly useless for the purposes for which it was designed, and, while it affords no protection to the public health, it militates against the advancement of real sanitary operations, and interferes with, and, in some instances, stops the progress of legitimate commerce and national intercommunication. We cannot close this brief notice without cursorily mentioning the Appendix, by Dr. Gavin Milroy, a gentleman well known as an enlightened and strenuous sanitary reformer; this Appendix gives a "historical sketch of quarantine legislation and practice in Great Britain," and is a most able exposition of the subject, showing the steady advancement, in this country, of sound views regarding the imposition of quarantine as protective of the public health, until the restrictions of that most unscientific system have become almost a dead letter, and there have been substituted in lieu of it sensible sanitary measures.

It is certainly much to be regretted, that other countries, generally, have not followed our progressive example; but we trust the time is not far distant when wise councils will prevail, and when the philanthropic exertions of the National Committee for the Promotion of Social Science shall have cleared away the mists of ignorance and prejudice which hang around the understandings of those who still cling to the wretched fallacy of quarantine.

A Practical Treatise on the Use of the Ophthalmoscope. By J. W. HULKE, F.R.C.S. Royal 8vo, pp. 77. London: Churchill. 1861.

AN instrument that has effected so thorough a revolution in ophthalmic surgery as the ophthalmoscope must, deservedly, be an object of interest to the medical profession in general, and to those members of it in particular who have made this branch of surgical science their special study. A standard work on the ophthalmoscope, written in the English language, has long been wanted; and although Mr. Hulke does not pretend to fill up the vacuum with the work we are at present noticing—laying it before the profession merely as an elementary treatise—still it is by far the most complete that has as yet been published on the subject in these countries, and we shall endeavour to notice, as briefly as possible, some of its most interesting points.

The author adopts Zander's classification of the different kinds of ophthalmoscope, viz.:—

"1. Ophthalmoscopes in which the reflector consists of slips of highly polished glass with plane parallel surfaces—as Helmholz's and Follier's.

"2. Homo-centric ophthalmoscopes, concave mirrors of silvered glass or metal—as Ruete's and Liebreich's.

"3. Hetero-centric ophthalmoscopes, plane or convex specula, in combination with a convex lens—as Coccius's and Zehender's. The prismatic ophthalmoscopes, which are but little used, fall under this class.

In every ophthalmoscope three principal conditions must be fulfilled:—1. It must be able to give a sufficiently bright illumination of the fundus; and 2. This in such a manner that the examiner's eye can be brought into the line of the rays incident upon the eye under examination, or nearly so, in order that it may receive the reflected rays returning from the latter. 3. It must provide for the proper accommodation of the examiner's eye, so that this can produce a distinct image of the part of the examined eye.

The images seen with the ophthalmoscope are of two kinds:—1. A real inverted aërial image, situated in front of the eye examined; and 2. An erect, virtual, geometrical image, which may lie in front of the eye examined, or behind it. The observation of these inverted and erect images of the fundus is termed the examina-

tion by the indirect and the direct method. In the indirect method the objects are less magnified, the portion of the fundus seen at once is larger, and a better idea of the relative position of its parts is gained; this method of examination is also the more easily acquired. The direct method gives greater enlargement, but a smaller portion of the fundus is comprehended in the field; it is therefore better fitted for the investigation of minute details than for obtaining a general view. Thus each method has its peculiar advantages, and the selection of one or the other must depend on the work required of it.

As the ophthalmoscope has been very appropriately termed an eye-mirror—*Augenspiegel*—by its German inventor, so also are the terms employed to denote the various modes of employing it of German birth. When the examination is conducted in the original manner, described by Helmholz, with a glass reflector and concave lens—*i. e.*, the upright image produced—it is styled in England, as in Germany, examination by the upright or direct method—*die Untersuchung im aufrechten Bilde.* When a metallic reflector and bi-convex object lens are employed—*i. e.*, the inverted image of the fundus produced—it is called, in Germany, examination in the inverted image—*die Untersuchung im umgekehreten Bilde.* This is styled by Mr. Hulke the *indirect* method of examination. We must confess we are disposed to find fault with this term, inasmuch as it seems to us calculated to mislead the student, as if the eye itself were not directly examined, but had to undergo a preliminary or intervening process before a diagnosis could be made. We consequently think that as the study of the instrument is but as yet in its infancy in England, the more clear and unequivocal the technical terms employed the more readily will a due appreciation of the subject be arrived at by the student. We would, therefore, suggest examination by the inverted method as a more appropriate term.

The direct method of examination was the original one discovered and recommended by Helmholz; but before we enter into an explanation of it we shall give a brief sketch of the instrument itself. Helmholz's ophthalmoscope, says Mr. Hulke, is a short blackened metal tube, closed at one end by a plate centrally perforated, which supports a hollow, triangular, prismatic metal box. The base of this prism is connected with the plate by a short open cylinder, in such a manner as to allow the rotation of the prism on the axis of the tube. The long side of the prism contains the reflector, com-

posed of three plane polished slips of glass, inclined at an angle of 56° to the axis of the tube, the other end of which contains a concave lens, which is held in position by a friction tube. In order to examine an eye with this instrument the patient must be placed in a darkened room, and seated on a level with the examiner, the lamp being placed on the same plane, and a little posterior to the eye that is to be examined. The rays of light from the lamp falling on the glass reflector which is held close to the eye, are reflected into it, so as to sufficiently illuminate the fundus, which will then present a brilliant red colour. Some of the rays returning from the eye under examination to the glass reflector, pass through it, others are reflected back again to the lamp. But as a normal eye can only produce images with diverging or parallel rays; and as these returning rays are converging, Helmholz was obliged to interpose a concave lens between the reflector and the examining eye, thus rendering them parallel or divergent, forming an erect image on the retina of the observer. Mr. Hulke's objection to this instrument is, that it reflects too feeble a light into the eye, so that the fundus cannot be sufficiently illuminated. It has, however, been modified by Edward Jäger; and we think that in its modified form it is eminently adapted for the examination of all cases in which an over-sensibility of the retina exists.

Zehender, not satisfied with the illumination afforded by Helmholz's ophthalmoscope, invented an instrument, also for examination by the direct method. This consists of a convex metal speculum in combination with a bi-convex lens, which is of shorter focal length than the negative focal length of the speculum. The clip which holds this lens is mounted on a jointed bracket which turns right and left on the short handle of the speculum. A clip for an ocular lens is hinged to the side of the frame. Mr. Hulke prefers this instrument to that of Helmholz, as it gives a superior illumination; he finds it, however, less easy to manage.

In the direct method of examination (observation of the erect geometrical image), where both eyes are emmetropic, and their accommodation is suspended, if the surgeon bring his eye very close to that of the patient it will receive parallel or even diverging rays from the fundus of this, which it can unite in an inverted image upon its own retina; and this image will be mentally projected, as an enlarged, erect, geometrical one, apparently situated behind the patient's eye. But should the patient or the surgeon be myopic, a concave lens will be necessary, in order to give the reflected rays

the requisite parallelism or divergence; and this may be placed either before or behind the speculum.

The author remarks that, in order to examine an eye by the direct method, the pupil should be fully dilated, and the accommodation paralysed with atropine. This is not necessary in all cases. In Berlin and Vienna there are large classes for the purpose of ophthalmoscopic study, conducted by Liebreich and Edward Jäger; and it is only in exceptional cases, such as where there is an extraordinary degree of myosis present, that atropine is had recourse to; in fact the professors take particular pains in impressing on the students the very small number of cases in which dilatations of the pupil is necessary.

In Berlin the inverted method of examination is more frequently employed than the direct. In Vienna just the opposite. Both methods are, however, from time to time employed at each of the above-mentioned celebrated cliniques. Still the mode of examination at present most in vogue, both in these countries and on the continent, is by the inverted method, and the instruments most frequently employed for this purpose are the inventions of Von Graefe's assistant, Liebreich. There are two of these, a large and a small one, both made by Paetz and Flohr, of Berlin. The large one consists of two tubes, one sliding within the other by a rack and pinion. The tube next the observer contains the speculum, which swings vertically on trunnions revolving in the clips in such a way that it can be easily removed and replaced. A portion of this tube is cut away, in order to admit light to the speculum, behind which there is a narrow slit for a convex ocular lens of low power. The tube next the patient contains a convex lens of about two inches focal length, swung in the same manner as the speculum. This tube is encircled by a stout collar, which slides on a vertical rod, so that the whole can be fixed at any convenient height. The lower end of the rod has a clamp for fixing to a steady table. Above, the collar bears a graduated, horizontally-sliding rod, ending in an oval plate, against which the patient steadies his forehead. Additional steadiness is gained by a chin-rest. A small brass tube, mounted on a jointed bracket, forms a convenient object for the patient to fix his eye upon. A couple of small blackened tin shades cut off the direct rays of the lamp from the patient's and surgeon's eyes. This is an excellent instrument for demonstrating cases to a class. We have seen from 15 to 20 students, one after another, examine the details of the ground of the eye with it, in the space

of a couple of minutes, and without causing the slightest uneasiness to the patient.

Liebreich's small ophthalmoscope is a concave metal speculum, one inch and a quarter in diameter, and of about four inches focal length, pierced by a central sight-hole, the diameter of which slightly exceeds one line. The margin of this sight-hole is a thin blunt edge. The speculum is set in a metal frame, to which a light handle is attached; and a small clip for an ocular lens is hinged to the frame in such a manner that it can be folded against the back of the speculum on the sight-hole.

The explanation of the mode of using those two ophthalmoscopes is as follows:—The rays of light from the lamp, incident upon the metal speculum before the eye of the observer, are reflected convergingly towards the patient's eye. Before reaching this they are intercepted by a bi-convex lens of short focal length, which increases their convergence, so that they intersect at a point anterior to the patient's retina, and illuminate the fundus with dispersed light. The pencils of returning rays from this circle of dispersion would meet at a distance from the patient's eye equal to its anterior focal length; but, passing through the bi-convex lens, they converge to earlier foci, and form an enlarged and inverted image, visible to an observer's eye at the sight-hole of the speculum. In order to explore the refracting media of the eye the speculum alone should be used; and the result, remarks the author, when these are perfectly healthy, is negative. Small threads of mucus or beads of froth on the front of the cornea sometimes mislead persons unaccustomed to the use of the ophthalmoscope; the illusory appearances they produce vanish when the cornea is swept by a winking movement of the eyelid.

The optic nerve piercing the sclerotic and choroid, a little below and to the inner side of the axis of the eyeball, is brought into view when the cornea is turned slightly towards the middle line, because this is attended by a corresponding outward movement of the posterior pole of the globe. The colour of the optic disc and the distinctness of its outlines depend on the amount of blood circulating in it, on the mode in which the large vessels traverse it, the degree of illumination by which it is seen, and very much on the colour of the adjacent fundus. With regard to the shape, conicity, &c., of the optic disc there were, until very recently, a great number of opinions on the subject, all differing more or less from each other. Thus the term optic papilla was given to it, because it was

at one time believed that it projected into the vitreous humour in the form of a cone; and some French writers still believe this to be the case. On the other hand a celebrated German authority declared that, instead of an elevation being present, there was in reality a depression, and he based his opinion on the result of *post mortem* examinations. Mr. Hulke says the optic disc rises very slightly above the general curve of the fundus oculi, and does not project into the vitreous humour in the form of a conical papilla, as it was formerly thought to do. Its centre is even slightly depressed where the nerve fibres are deflected on all sides towards the retina, and its circumference alone is slightly raised when the aggregate nerve bundles of the entire retina bend round the margin of the choroidal foramen. This is the view now taken of the subject by the greater number of writers both in England and on the continent; the depressed optic discs observed at *post mortem* examinations being in reality a diseased state, now well known under the term excavation of the optic nerve.

The phenomena of venous and arterial pulsation which the author states are seen at the optic disc, are seldom or never so easily distinguished in the healthy human eye as one might be led to suppose from the manner in which he describes them. As a general rule no pulsation whatever is observed in the retinal vessels of a healthy human eye except when pressure is made on the eyeball. If we take a healthy human eye, or the eye of an animal, and subject it to ophthalmoscopic examination, in all probability no pulsation whatever will be seen; if, however, we make slight pressure with the finger on the eyeball, we immediately observe pulsation in the vein, which is larger than the artery, and of a darker red, almost approaching to a crimson colour. If we press the eyeball a little more firmly the venous pulse becomes small, the optic disc assumes a blanched appearance, and the arterial pulse becomes visible. By still further increasing the pressure we may cause the arterial pulse to disappear completely. It was the discovery of the fact that pulsation of the retinal vessels was the result of increased intra-ocular pressure that led Von Graefe to propose iridectomy as a cure for glaucoma. In describing the red colour of the fundus of the living eye, the author remarks that this has been ascribed to the reflection of red light by the vascular nets of the retina and choroid, and particularly by the chorio-capillaris, but strictly it is chiefly due to the colouration by the choroid of the light returning through it from the inner surface of the sclerotic. The colour of the fundus of the

living eye varies so much in different persons that we do not remember to have ever examined two individuals in which it presented the same identical shade. In the dark-complexioned inhabitant of southern Europe—particularly in Spain and Portugal—the fundus is generally of a dark-red colour; while in the negro it presents almost a reddish-black appearance; in albinos, on the other hand, it is always of a faint pinkish colour. As a general rule, the younger the person the lighter will be the colour of the ground of the eye. We can well believe the author when he states he has hitherto failed to recognise the chorio-capillaris. We confess we have seldom seen it except in persons of very fair complexions; and even in them it was exceedingly indistinct. When there is even but a moderate quantity of pigment present it is altogether impossible to distinguish the very minute meshes of this structure.

With regard to the abnormal appearances presented by the human eye when subjected to ophthalmoscopic examination, the author has entered fully into the subject, quoting largely from French and German writers. There is one statement, however, which he makes, in speaking of opacities of the capsule of the lens, which somewhat surprises us. He says:—

"Opacities upon the anterior capsule of the lens (*which itself never loses its transparency*) consist, for the most part, of lymph and pigment derived from the iris. The pupil, when dilated, is indented, and its margin is tied by fibrous cords, which often branch as they spread out on the lenticular capsule; such cords have a pearly, silky texture, or are coloured with uveal pigment. They do not reach quite to the centre of the lens, but start from points in a circle, which corresponds to the position of the pupil at the time the lymph was poured out."

Mr. Hulke seems to have followed up the error of Malgaigne, who was in the habit of exclaiming before his class, "Examinez une capsule cristalline, chez tel cataracté que vous voudrez, lavez la avec precaution; vous la trouverez toujours aussi transparente que Dieu l'a faite." That this was assuredly an error, the microscope has since proved beyond all doubt; and it is now almost universally admitted that there exist veritable opacities of the capsule; that is to say organic modifications peculiar to it, apart from the opacities which adhere to its anterior face. During our attendance at Professor Arlt's *clinique*, in Vienna, we had an opportunity of seeing that gentleman extract a capsulo-lenticular cataract, both the lens and its capsule being completely opaque; and he

called the attention of his class to the fact that the opacity of the capsule was not caused by any deposit on its anterior surface, but was the result of an organic alteration in its structure, which he proved by first washing the capsule, and then placing it under the microscope, when each student present had an opportunity of examining for himself, and forming his own opinion on the subject; and we ourselves entirely acquiesced in the correctness of the professor's statement. The same distinguished oculist also lays down distinctly in his book on diseases of the eye, that there are two kinds of capsular cataract, viz., that resulting from a deposit on the anterior surface of the capsule, and the other as an alteration in the structure of the capsule itself; he has also in his possession a number of thickened, opaque, cartilaginous capsules, which he has extracted from time to time in his practice, and which we ourselves have seen; and he states in his lectures that a year never passes without several cases of the same kind coming under his observation.[a]

On referring to Mackenzie's work on eye diseases we find the following passage. Speaking of capsular cataract, he says:—"On operating I have sometimes found these specks (*i. e.*, deposits on the anterior surface of the capsule) to separate readily from the capsule on being touched with the needle, and to fall forward through the dilated pupil into the anterior chamber. In most cases the deposit appears to be in the membrane, not on it merely; its texture is thickened and opaque throughout."

The author gives an excellent description of a diseased state known in this country by the name of "floating retina,"[b] with which, before the invention of the ophthalmoscope, we were but very imperfectly acquainted. Alluding to the manner in which it commences, he says:—

"It has been very generally thought that the detachment always begins at the lowest part of the fundus, near the equator; and it may be safely said that it is generally first observed in this locality; but the possibility always remains that the fluid beneath the retina, at this part, has merely gravitated here, having been originally poured out at a higher part of the fundus. This is supported by a case on which I observed the subsidence of a portion of detached retina lying above the optic nerve entrance, simultaneously with the appearance of a fresh detachment below the nerve

[a] *Vide* Arlt über die Krankheiten des Auges.

[b] In France it is termed "decollement de la retine;" and in Germany "Ablösung der Netzhaut."

at the equator. Similar cases have been recorded by V. Graefe. And it is probable that the occurrence would often be noticed if cases of detached retina generally came under our notice at an early stage. But this does not commonly happen; for the separation creeps on so insidiously—being unattended with pain or any external signs of mischief—that sometimes the lower hemisphere of the retina is stripped off from the choroid before the patient is aware that anything is wrong with his eye; and indeed the discovery is sometimes made accidentally by closing the sound eye."

The different diseased states of the eyeball, made visible by means of the ophthalmoscope, are elaborately entered into and illustrated in this very valuable treatise. The illustrations reflect the highest degree of credit on both author and artist; and we can confidently recommend the work to the profession as the best English guide that has as yet been published, to the study of a most useful and truly important branch of ophthalmological science.

On the Treatment of Fracture of the Lower Extremity of the Radius. By ALEXANDER GORDON, M.D., L.R.C.S. Edin., &c. Belfast: Alex. Mayne. pp. 15.

THIS is a very clever *brochure* on the treatment of a frequently occurring accident. The plan of management recommended differs from all those hitherto advised by surgical writers, and has much in it to make it worthy of careful consideration:—

"I have no hesitation whatever," says the author, "in stating that the methods of treatment which have been hitherto pursued in this common accident have failed. . . . They do not afford such a solid support to the radius as is requisite for the restoration of its natural form; nor, if the form be restored by coaptation, will they maintain it until firm osseous union has taken place."

Dr. Gordon gives a good description of the deformity, and of the physical signs which characterise this fracture. He passes in review the plans of treatment described by Dupuytren and Nelaton, and gives good reason for rejecting them; and, at p. 8, describes his own splint thus:—

"The splint which I use has attached to its radial border a piece of wood, so bevelled that it fills up, and fits accurately, the natural concavity

of the radius. The fracture renders the palmar surface of the radius convex instead of concave, its normal form. The surface of the attached piece of the splint is also convex, and covered with tow, a piece of spongio-piline (the best material), or some other soft substance. The splint being thus covered is then applied to the fore-arm. The convexities of the splint and radius are mutually brought into apposition; about half an inch, or perhaps a little more, of the lower end of the radius is unsupported, because of the alteration in its form. A thick pad, similar to that used by Nelaton, is now applied over the posterior surface of the carpal fragment of the radius and carpus, and over this a splint, extending from the upper and back part of the fore-arm to the metacarpus."

He then describes the action of the splint, and gives cases to prove its efficiency. The intention to be fulfilled by Dr. G.'s splint is admirable, and has been carried out in the most satisfactory manner, for many years, at the Meath Hospital, in this city, in a much simpler, and in at least as efficient a manner, by the plan first introduced by the late Sir Philip Crampton. Dr. Gordon differs from all preceding writers in recommending the fore-arm to be kept in the prone position, but in this, as well as in the preserving of the arch of the radius, he was anticipated by at least 30 years by the practice of Sir P. Crampton. The "bevelled piece of wood" for a support to the lower portion of the upper fragment, is highly to be commended, and worthy of adoption.

Dr. G. does not attach sufficient importance to the displacement of the hand towards the radial side, and the projection of the lower extremity of the ulna inwards; and there is no provision in his apparatus for remedying this deformity. The shortness of the under splint, and the leaving the hand unsupported is objectionable. Certainly the upper splint, with the pads to depress the hand, will give some fixedness to the wrist, but not such as is obtained by an under splint sufficiently long to support the hand.

When the injury under consideration, long known as "Colles's fracture of the radius," is treated in the following manner, it may be so remedied that no deformity whatever will be left to point out that the bone was ever broken.

A splint is prepared a little broader than the fore-arm, tapering from above downwards, so as to suit the outline of the limb, and long enough to extend from the elbow to the phalangeal extremities of the metacarpal bones; it is to be cut away obliquely, at an angle of 45 degrees, so that the hand, when laid upon it, is given an inclination towards the ulnar side. There is no necessity for any

other splint. A thin pad is laid on the splint; then a wedge-shaped compress, or cushion of lint, sufficiently large to fill up, or rather to restore, the natural hollow which ought to exist above the wrist, is applied. The hand is then bandaged down to the lower extremity of the splint; and, in recent cases, the lower third of the fore-arm is left exposed for the application of leeches or lotions; the upper two-thirds are fixed to the splint by a roller, and in two or three days the roller is applied continuously from the hand up to the elbow. The advantages of this method are, that we not only preserve the arch of the radius, and restore the hand to its natural position, but, by supporting the hand, relieve the patient from much discomfort, and can dispense with the posterior or dorsal splint.

A surgeon states that he tried Dr. G.'s splints, prepared exactly as recommended by him, but the patient could not bear them from the want of sufficient support to the hand.

The late Sir Philip Crampton, aware of the importance of preserving the arch of the radius, proposed to have splints made of "Sparks' patent leather," or common sole leather, moulded upon casts taken from well-formed fore-arms. These being kept of different sizes could, with a little padding of raw cotton, or white wadding, be accommodated to limbs of various sizes. No doubt a well-fitting splint of this kind would be the most efficient and the most comfortable one the patient could have. The leather should rise sufficiently high on the radial side, to ward off the pressure of the bandage from the bone. This object is attained by Dr. G. thus. He says, p. 14:—

"On the radial side it (the splint) should project beyond the radius; and the bevelled piece for filling up the concavity of the radius should be attached half an inch at least internal to that border. By this arrangement the ulnar side of the fore-arm sustains the pressure of the bandage or straps. The reverse is the case on the radial side. The radial border of the splint alone is pressed upon; this pressure forces the bevelled portion inwards upon the concavity of the radius, and pushes it backwards, while, at the same time, the outer border of the radius is protected from pressure."

This desirable object has been obtained in another way by the following device, which has been occasionally used in the Meath Hospital for some years, and which not only keeps the radius from pressure, but retains the prism-shaped pad in its place:—A thin slip of wood is secured to the radial side of the splint, and extends

from the wrist about five inches up the arm; it should be sufficiently high to reach just above the outline of the radius; this will effectually protect the radius from pressure, and will throw it upon the ulna, so as to keep it firmly down to the splint.

Dr. Gordon deserves great credit for the valuable pamphlet he has published, and for calling attention to this method of remedying the deformity resulting from "Colles's fracture." All that we have said only confirms the soundness of his views with regard to the cause of the deformity, and the manner of relieving it. We sincerely wish that his pamphlet may have a wide circulation; but we thought it due to him who has departed from amongst us to allude to the plan of treatment initiated by him, and to which that of Dr. Gordon bears, in the intention to be carried out, so striking a resemblance. Sir Philip Crampton, though he never wrote an account of his plan, yet gave it a considerable amount of publicity by practising it in a large hospital, before numbers of students, for many years.

Manual of the Dissection of the Human Body. By Luther Holden, F.R.C.S., &c. Second Edition. Illustrated. pp. 576. London: Churchill.

Unquestionably the most reliable test of the real value of any literary production, is its appreciation by those for whom it is intended: hence, we judge that the demand for the Second Edition of Holden's Manual, is a compliment far superior to any which lies in the power of a reviewer to offer. However, the work has been placed in our hands for inspection, and we shall proceed to state, candidly, the opinion which we have formed of it on careful perusal:—.

Of the general style, we have much to say in commendation. The system of arrangement is admirable; the facilities of reference abundant; and the diction throughout is clear, bold, and concise; admirably suited for the student of anatomy, who, unfortunately, in too many instances, is not alone daunted by the stupendous task before him, but puzzled and disheartened by the obscurity of the works which are intended to assist and lighten his labours.

Nevertheless, although we feel it a pleasing duty to praise Mr. Holden's Manual, we are not, by any means, prepared to grant that

it is all the student needs to assist him in learning anatomy; or the practitioner to refresh his memory, and suggest to him in difficulty. Books and the knowledge they can give, as well as other aids to science, are viewed differently according to the circumstances, dispositions, and preconceived notions of the beholder. The half fledged student sees only in anatomy and physiology the "bugbear" of his final examination, and eagerly cogitates how he may "cram up" the requisite amount. The vast majority of practitioners think of it, merely in reference to palpable necessities, and cast aside as superfluous, all which does not bear immediately upon daily routine. The true disciple of Medicine, however, cannot view the study of anatomy and physiology otherwise than as the real and indispensable key to all knowledge, and as such, pursues it untiringly, satisfied that every advance in its elucidation, howsoever transcendental it may appear, will infallibly confer benefit on his fellow-creatures, and distinction upon himself. It is needless to recall instances to illustrate the truth of this position—we would rather challenge those who may dissent, if such there be, in real earnest, to bring forward one single fact to gainsay it. The opinion formed of Holden's Manual—the work at present under consideration—will vary according as the umpire belongs to one or other of the classes of observers sketched above. For our part, we are disposed to think that it is best suited for a hand-book for the junior student; that it is less useful as a reference for the practitioner; and wholly deficient for those who seek to advance the profession of their choice, by a comprehensive and philosophical study of the groundwork upon which its fabric rests.

Mr. Holden's works, as far as they go, are remarkable for clearness, and for the degree in which they simplify the subjects treated. His work on Osteology, although open to improvement in many respects, has proved a real boon to students; and the new edition of his Manual will, undoubtedly, do no less in many respects. Yet, we feel surprised that, from a work avowedly intended for students, there are omitted a vast number of those devices which experience proves to be valuable aids in teaching anatomy. For example, in the demonstration of the neck, where the parts of importance are numerous and difficult to understand in their mutual relations, we have invariably found that, to define with brevity and accuracy the triangles, their linear boundaries, the exact formation of their floors, and finally, to give a concise account of their absolute contents, properly classified, so materially aids the student as to

reduce his labour to a very moderate one. A proper subdivision of certain of these spaces, likewise, aids the learner considerably. For example, the digastric space taken as a whole, from the number of parts contained, taxes the memory seriously; whereas, if the portion superficial to the mylohyoid muscle be considered apart from the portion deeper than it, then the whole difficulty is at an end. The first is the submaxilliary space proper; the second is the sublingual. The necessity for this subdivision is acknowledged in the work before us, by the introduction of two wood cuts, (Figs. 4 and 5,) representing each of the spaces in question. The posterior division of the digastric space, into which may be thrown the remarkable fossa which accommodates the parotid gland, is glanced at but superficially; and the relative anatomy of the great vessels of the neck is, for the most part, given much less completely than we consider desirable.

Passing to the description of the heart, we are surprised to find no mention of the safety-valve action of the right auriculo ventricular valves, a wise and indispensable provision of nature, first alluded to by Hunter, and more fully elucidated by Mr. Adams, of Dublin, and Mr. King, of London. The description of the larynx, however, is excellent; and the mode of explaining and delineating the action of the muscles is most ingenious and useful. Looking to the dissection of the upper extremity, we find the anatomy of the pectoral region given admirably; but, to criticise, rather too briefly, considering its importance in a practical sense. There exists, moreover, a strange laxity in the terms in which the muscles are described. For example—the subclavius muscle is stated to arise from the cartilage of the first rib, and to be inserted into the under surface of the clavicle; but it is not stated *at what portion of the clavicle* it is inserted. The relative anatomy of the muscular system is very defective, and the action of the various muscles too sparingly described. For example—the action of the pectoral muscles in forced respiration is totally omitted; and the action of the capsular muscles (as such) of the shoulder joint, shares a like fate. Again, the remarkable mode of origin, insertion, and obvious subdivision of the serratus magnus is passed by unnoticed. In the description of the axillary artery its relations are too briefly given, and its divisibility into stages—a decided assistance to the student—is omitted. In Fig. 44, which represents the bend of the elbow, the semilunar fascia given off by the biceps tendon is by no means clear; and yet its importance with reference to venesection is considerable.

We cannot fully approve the rule laid down at this point for bleeding. Experience in the dissecting room has shown us the great frequency of irregularities in the brachial artery, and we have come to the conclusion that careful palpation to ascertain its position is the only reliable safeguard to the surgeon. Fig. 45 is a pretty diagram of the anastomosis at the bend of the elbow, on the same plan as Fig. 7, which shows the inosculations of the subclavian artery. We are disposed to think that these diagrams would be much clearer if outlines of the skeleton were added. Without this they are somewhat obscure—at least to the junior students, for whom they are intended. The anatomy of the fore-arm and hand is admirably done, on the whole; but we are inclined to reject the guide recommended for ascertaining, on the undissected hand, the exact position of the superficial palmar arch—namely, a line drawn horizontally across the palm at the junction of its upper with its middle third. We consider that, a much safer and more accurate indication is the line visible on every palm, leading from the metacarpo-phalangeal articulation of the index finger to the pisiform bone. The descriptions of the articulations of the upper extremity are given in very rapid style, and, of necessity, there are many omissions. Among others we may mention that of the gleno-humeral or intra-articular ligament of the humero-scapular articulation, a description of which was published in the *Lancet* (1829–30), by the late Mr. Valentine Flood. On turning to the abdominal muscles, we are greatly surprised at the brief manner in which we find them disposed of. In fact, it is beyond our comprehension how any student could learn to understand this difficult passage of anatomy solely from the means here placed at his disposal. The description of the anatomy of inguinal hernia is likewise very insufficient. Obvious and palpable layers of fascia, which form coverings, are passed without mention; and many highly practical points connected with the abdominal pouches are contemptuously neglected.

Among numerous omissions hereabouts we may quote the absence of all remark explanatory of the utility of the triangular ligament given off from the inner insertion of Poupart's ligament, in opposing the protrusion of a direct inguinal hernia. Moreover, strangely enough, Mr. Holden, who appears to understand better than most authors the true anatomy of this ligament, forgets to ascribe its earliest notice to the late Mr. Colles of Dublin. This omission surprises us the more, because throughout the Manual a vast amount of learning is exhibited in the abundant references to the various

authors who have written upon anatomical subjects. To a succinct account of the abdominal cavity and its contents follows the description of the perineum and generative organs in both sexes. This most important portion of Mr. Holden's work is executed with admirable clearness and simplicity. We have but one fault to find with it, and that is with the illustrations. It is true they may answer as diagrams; but we cannot see the object of representing parts in grotesque disproportion. The anatomy of the lower extremity is next considered, and is introduced by an excellent account of femoral hernia. There are certain anatomical points concerning femoral hernia on which we unhesitatingly differ from the author. Nevertheless, where there is any ground for discussion we would not presume to urge our own opinions. We cannot understand Mr. Holden when he says, that he never could find that membranous partition between the abdomen and thigh which Cloquet described as the "*septum crurale.*" Occasionally it is badly marked; but we have recently demonstrated it several times, and exhibited it on the subject as plain and undeniable as Scarpa's fascia, or the deep layer of the superficial fascia of the groin—a structure to which Mr. Holden makes no allusion whatever. We observe other points of dissent; but their discussion would carry our review (already somewhat lengthy) beyond reasonable bounds. The articulations of the lower extremity are disposed of in an amazingly brief style; and not only with omissions, but errors also. For example—there are several mistakes in the description of the ligamentum teres of the hip joint. In the first place, the branch of the obturator artery which supplies it *does not go* to the head of the femur. The careful injections of Hyrtl, of Vienna, have disproved that notion. Again, the view advanced by Weber, and adopted by Mr. Holden, namely, that the ligament is tense in the erect position of the body, and therefore limits the movements of the pelvis, is erroneous. In the erect posture it is *absolutely relaxed.* Neither does it limit rotation, as described in the work before us, but merely rotation outwards *when the thigh is flexed.* These errors surprise us, because the student is recommended to inspect the ligament by removing the floor of the acetabulum. Such a dissection, which was long since made by Struthers, of Edinburgh, and Humphreys, of Cambridge, instantly demonstrates the errors of the description given in the Manual.

The lower extremity concluded, the dissection of the nervous centres—the brain and spinal chord, is undertaken. The clear and

simple manner in which this is done must strongly recommend itself to the learner, as well as the diagrams illustrative of this complex portion of anatomy, which are original, ingenious, and useful.

In conclusion, we feel bound to confess the general satisfaction with which we have made acquaintance with Mr. Holden's contribution to the literature of anatomy, and to congratulate warmly the student commencing his labours on the valuable handbook and companion in the dissecting room now placed at his disposal.

On the style in which the book is brought out we need make no comment. It will suffice to remark that it fully sustains Mr. Churchill's reputation.

The Modern Pathology and Treatment of Venereal Diseases. By PATRICK HERON WATSON, Assistant Surgeon to the Royal Infirmary, &c. Edinburgh: Sutherland and Knox. pp. 39.

On the Relative Influence of Nature and Art, in the Cure of Syphilis. By THOMAS WEEDON COOKE, Surgeon to the Royal Free Hospital, &c. London: Renshaw. Pamphlet, pp. 64.

On the Successful Treatment of Gonorrhœa and Gleet, without Copaiba. By THOMAS WEEDON COOKE, Surgeon to the Royal Free Hospital, &c. London: Renshaw. pp. 32.

THE first pamphlet is a reprint of a very able review, which appeared in the *Edinburgh Medical Journal*, some time back. It consists of two parts—the first, which treats of gonorrhœa, will meet with very general approbation. The views of John Hunter on the identity of the gonorrhœal and syphilitic poisons, are now being so universally given up as untenable, that no laboured argument is needed to overthrow them. The purely local character of gonorrhœa and its incapacity to produce chancre by inoculation, are now accepted points. Almost equally accepted is the fact, that every portion of mucous membrane is capable of gonorrhœal inflammation, and that wherever it commences in the urethra it is liable, if unchecked, to pass back through the entire canal, and thence, by the vas deferens to the epididymis; differing nothing in this from any other inflammatory affection in the neighbourhood, for we not unfrequently see orchitis resulting from inflamed prostate or bladder. Holding these

views fully, it is natural that the bent of his (Watson's) mind, should be towards a local treatment, and that he recommends the use of astringent injections, largely diluted at first, and increased in strength as the diminution of irritability may dictate. Still he clings, somewhat needlessly, as we think, to the "dirty, nauseous, and permeating drugs, copaiva and cubebs," attributing to them, however, only the local action through the urine, which Ricord has demonstrated to belong to them. In gonorrhœal ophthalmia he adheres to Guthrie's ointment, and the solid nitrate of silver pencil; for ourselves, we have seen more benefit from a half hourly injection of a very weak solution—gr. $\frac{1}{2}$, or even less, to the ounce—than from the heroic plan; nor can we understand why a weak astringent is recommended in the case of the urethral inflammation, and a strong one for the same condition in the conjunctiva. The results, however, are the grand test of a theory; and since we have put in practice the repeated weak injections we have never lost an eye, though dealing with some cases of formidable severity. The rule which we have more than once laid down, with reference not only to gonorrhœal, but to all inflammation, and to the internal as well as the external application of remedies, is—the more acute the inflammation, the more diluted and the more frequent should the application of the remedies be; and the more chronic the inflammation, the stronger and less frequent. This rule approaches to a law in its invariable certainty, and is applicable to a multitude of cases which, at first sight, have no apparent connexion with one another.

We now turn to Mr. Watson's second part, which treats of syphilis. If Carlyle has truly said that the History of the French Revolution has been written in hysterics, with how much greater truth may this be said of syphilis. No man seems to approach syphilis content to observe, and not to generalize. Mr. Watson is no exception—he dogmatises with a vengeance—he is a strenuous upholder of the doctrine of the diverse nature of syphilis. In his pages we find very pretty descriptions of "The simple *soft* non-infecting chancre; and the *indurated*, the infected, the Hunterian chancre, the *chancre* proper, with its *inevitable* syphilitic infection." The characteristic suppurating bubo of irritation, which accompanies the former, and the gland or glands of stoney hardness which are the mark of the latter, are also very neatly described. Destruction by powerful caustics is recommended for the one sore; a prolonged exhibition of mercury for the other. A denial of a power in secondary syphilis to infect, is also prominently put forward. The

only possible objection to such pretty theories, is their inconsistence with every-day facts—but, even here Mr. Watson is triumphant. Has any man observed secondary syphilis result from a soft chancre? forsooth he has overlooked the hard stage, or a concealed chancre, or a former infection! for your hard chancre is a frail and fickle thing, here to-day, and gone to-morrow! Has any one observed an undoubted hard chancre not treated by mercury, and not followed by secondaries; still, there is the loophole that his hard chancre was but a soft one, with a base of inflammation. Has any one seen a child with congenital syphilis, poison its nurse's breast by means of aphthous excoriations, which are certainly not primary sores! Mr. Watson wisely stops short of such discussions, and goes off on another tack, disdaining to notice so puerile an objection to his, or rather Ricord and Bassereau's theory. Many men can theorise beautifully, but bring them to the test of treatment, and they fail. It is not so, however, with Mr. Watson—while his theories are but rechauffés of the French School, his practice is soundly based, and may well be listened to by those who still dream of specifics; not that we accept it as our *credo* in its entirety, for who ever yet agreed thoroughly with the practice of another; but generally, it bears the stamp of sound science and good common sense. He says, "we do not claim for mercury any specific influence by means of which it follows out the syphilitic virus and neutralizes it; nor do we maintain that, in order completely to extinguish the diathesis, it only requires that a certain indefinite quantity of mercury should be given. We merely claim for mercury an eliminative power, by means of which a rapid metamorphosis of tissue is effected, and the symptoms of syphilis are hurried through their regular evolution by the elimination of those modifications of tissue, which the introduction of the syphilitic virus has produced." This is the key to his treatment, one precept of which will suffice:—"Wherever the gentlest possible physiological effect of the mercurial has occurred, then the full therapeutic effect has been attained; and anything further must be injurious. Whenever the gums become tender, our eliminative ultimatum has been reached; and all we can hope to gain by the employment of the remedy will be attained, by keeping up this condition for such a period of time as it seems to act, by improving the general health of the patient."

We must now turn from Mr. Watson to Mr. Weedon Cooke, whose theoretical opinions are, in many respects, diametrically opposed to those we have just considered. He not only declares

boldly that "The individual and not the virus, govern the character of the chancre, and, at the same time, determines the acceptance of, or the resistance to constitutional symptoms;" but proves his point, from the words of Ricord and Henry Lee. The former surgeon says in his lectures, "I think it may be inferred that, for the manifestation of constitutional syphilis, *certain peculiarities lying within the individual*, which have as yet escaped detection, are indispensable; and that syphilis is, in this respect, on a par with other contagious diseases." The latter surgeon may be looked upon as one of the great exponents of the French theories in England; and the following opinion given forth by him in Mr. Holmes' *New System of Surgery*, is of great importance in its bearing upon the question of diagnosis between infecting and non-infecting sores. "We have at present no generally recognised and well-defined mark of distinction, independent of inoculation, between those diseases which are syphilitic and those which are not." As contrasting the views of two Ricordites on a vital point of their theory, let us quote again from Mr. Watson and Mr. H. Lee:—The former says, "Induration is always an early symptom of an infecting chancre; if a chancre is to be a source of infection, the induration will appear about the third and rarely later than the seventh day after the commencement of the sore; but having once appeared, unless developed in a very characteristic degree, it may be evanescent;" "often," as Ricord says, "disappearing before the work of reparation is finished, and before cicatrization is complete." The latter, as quoted by Cooke:—"Infecting chancres do not generally show their specific characters for some time; even a month has elapsed before the induration has appeared." Like the cats of Kilkenny, celebrated in song, we may hang these observations side by side, content to let them annihilate each other.

Mr. Cooke further holds, that the skin is the proper organ for the elimination of the syphilitic poison—he conceives, "that mercury retards the natural cure, and substitutes a not innocuous means of relieving the symptoms for an uncertain period;" hence, relying on his own experience, and claiming to have seen "*several thousand* cases of hard chancre and its consequences;" he inclines strongly to chlorate of potash, and dilute hydrochloric acid, in doses of fifteen grains of one, and twenty drops of the other, in water; or infusion of Columba or gentian; limiting his use of mercury to sluggish bilious temperaments, when he may add a few grains of blue or Plummer's pill, for a few nights only. Iodide of potash he com-

mends only for periosteal pains; for local treatment, lotions of copper, zinc, or lead, and black wash, with gentle friction of blue ointment, for a few nights, when the ulcer is healed, to disperse the hardness, either local or in the groin. The hot air bath, the mercurial vapour bath, (stopping short of the specific action of the mineral,) with good diet, and warm clothing, &c., are to complete the cure. In fact, Mr. Cooke is as strong an anti-mercurialist as is possible for a man to be in the present day; and we fear he goes even a little further in this direction than we can follow him—not as regards the majority of cases of syphilis, which, after all, need mercury no more and on no other principle than do other diseases. With Mr. Watson, we believe, most men of sense now scout the notion of mercury as a specific, in the sense of its being an antidote to the venereal virus, and prescribe it, whether largely or with discretion, as an eliminator of effete and poisoned structure; but there is no denying the fact, that in one form of the disease, the congenital, (of which, by the way, Mr. Cooke says nothing), mercury is the only means at our disposal of effectually rousing the eliminating organs; and, even in some forms and constitutions, where the drug has been injudiciously thrown in, a state of system may have been induced, in which no other stimulus will call these organs into action. In such cases, and they are very melancholy, no relief will be obtained from severe suffering, without a further use of the very drug which has to answer for much of the existing mischief. These cases, however, are now rare, and bad tertiary symptoms would be a disgrace to surgery, were it not, that in most instances it owes its existence to the cupidity and folly of the unlicensed quack and his miserable victim. Few men owning and deserving of the name of surgeon, will now venture to submit their patients to the dangers of a six-months' persistence in the use of mercury, or even to a six-weeks' *course* of the drug, in the old acceptation of that term. In these views of the disease and its cure, we are but reverting to what Cullen long since propounded in his work on the Materia Medica; here, with true philosophy he lays it down, that the disease is to be eliminated by increasing the natural secretions of the body; and he recommends mercury on this ground alone. We who possess many other less dangerous weapons, can afford to lay it comparatively aside; but, because the majority do not require its administration, we must not flatter ourselves that we can cure the disease in all cases without it.

Mr. Weedon Cooke, on gonorrhœa, may be dismissed in a few

words:—He renders the urine neutral by a free use of alkaline carbonates; gets rid in this manner of the ardor urinæ and chordee; and then cures the running with solution of chloride of zinc, varying in strength, from half a grain to three grains per ounce. He very properly denounces nitrate of silver injections; has no opinion of cubebs and copaiva, as internal remedies. We have not prescribed either for many years; and trust, almost entirely, to well regulated injections, generally of alum. No injection should be used which does not coagulate the albumen of the purulent secretion; for, there are cases on record, in which cystitis has followed a warm water injection, which had sent on into the bladder the infectious pus from the urethra. From three days to a week, are sufficient to put an end to an ordinary gonorrhœa, by well-timed injections. Occasionally, in first attacks, some nauseating doses of tartar emetic will be required for bringing down excitement, and some alkalies to counteract the ardor urinæ; but in most cases we can cure the disease by local means alone.

In taking leave of these somewhat remarkable pamphlets, we beg to recommend them for perusal to all who are brought into contact with syphilitic practice; they will well repay a careful perusal, and contain more valuable matter than many an imposing quarto.

Mémorial de Therapeutique. A l'usage des Médecins Praticiens. Par le Docteur F. Foy. Paris: Germer Baillière. 1862.

Memorial of Therapeutics for the use of Practical Physicians. By Dr. F. Foy. Paris: Germer Baillière. 8vo, pp. 1225.

For some years past we have been labouring under the impression that the inhabitants of Great Britain are the principal worshippers at the shrine of Quackery—that the altars of the god receive its richest contributions from our fellow-countrymen, and that England is the Empirics Arcadia. Nor need the opinion that we entertain be wondered at, when one reflects on the number of advertisements that appears day by day in our public journals, emanating from so many different quarters, each and all of them vaunting the particular *Doctor* So and So and his stuff, the one as the incarnation of all human medical knowledge, the other (to use the mildest appreciative expression) as the Elixir Vitæ. Have you corns? try such and such pills; they will not only cure your corns, but give a fascinating

expression to your face, make your hair curl, and impart to you an inexpressible air of supremacy and command. Have you constipated bowels? why try such and such a mixture (N.B. the bottle at 33s. far more effective than that sold at 2s. 9½d.), it cures not only this complaint, but sterility, piles, coughs, fits, and, beyond all, that which has puzzled all our best authorities to do—consumption. To find one medium capable of curing every variety of venereal disease, has, in modern days, been solved by the fortunate and learned discoverers of the "Reach-so-far," and some two dozen other equally fortunate investigators; and, independent of these philanthropists, should their remedies unaccountably fail, have we not mesmerists, table-rappers, electro-biologists, bio-phrenologists, homœopathists, hydropathists, and every other variety of *trickem-opathists*, to fall back upon, to relieve medical science at the present day of the opprobrium of not being able to cure every disease brought on us by human folly, inheritance, or misfortune. Men, no matter with what little amount of brains they may be endowed, would hesitate ere they entrusted their fortunes to the tender mercies of a legal charlatan, but their lives are fearlessly, nay recklessly, committed to the care of any mountebank who has but the effrontery sufficiently to advertise himself and his wares. No wonder, therefore, that we should exclaim "Vive la bagatelle, England for the English, but the English themselves for the quacks."

Now, if Great Britain be the Eldorado of Empirics, France is the land par excellence of simples. In no other country on the face of the habitable globe is such reliance placed on remedies of no very apparent if not of questionable energy. And in the work, the title of which heads this article, we find a grand exposition of each and all of these. Nor is our author content with giving us formularies for these; his ambition is of a more vaulting character; it is presented to us as an encyclopædia of medical knowledge. In alphabetical order we have presented to us the names of every disease to which flesh is heir, and of all the resources of a most copious Materia Medica.

To give our readers some idea of the manner in which our author has acquitted himself of his self-imposed task—herculean almost in its contemplation—we shall open the book at haphazard, and submit some extracts for their consideration:—

"Dislocations of the Fibula upon the Tibia—Very rare dislocations."

We trust that our readers will not think us imposing on their credulity when we give them this extract as a *faithful translation* of M. le Docteur Foy's clear, full, and explicit descriptions and instructions on this form of surgical accident.

Again—

"Pott's Disease, or Vertebral Disease—Local and general symptoms—Destruction and suppuration of the bodies of the vertebræ, with gibbosity, inflection, and curvation of the spinal column, inconvenience in the movements and position — disturbance in the circulation and respiration, abscess by congestion, &c., according to the seat of the disease—abscess when the disease occupies the dorsal and lumbar portions, rare in the cervical region."

His remarks on aneurism are so happy and exhaustive, that we should not consider ourselves as having discharged our duty to such of our professional brethren in this city as have enriched this department of surgical science with their labours, did we not record them here for their special edification:—

"Aneurism of the Brachial Artery—Symptoms—compression of the radial and median nerve, whence the semiflexion of the arm, the pains in the fore-arm and hand, &c."

Hear this ye shades of Porter and Bellingham! read this Tufnell, and blush at all the time and paper you have wasted, when the task could have been completed in two lines and a half—and such a two lines and a half!

Again—

"Aneurism of the Femoral Artery—Symptoms—tumour suddenly developed, of a round shape in the upper part of the thigh, of a flattened one in the lower part of the limb, &c."

&c.! We have all heard much of Lord Burleigh's shake of the head, and of what a world of meaning was therein; but did any of us ever know of so comprehensive an &c. as this of M. le Docteur Foy? In it we must look for all that we should know of the diseases which he pretends to describe — in using this word "pretends," we do so advisedly. A more outrageous insult could not be offered the members of any profession, than to put forth such a work, under the pretence of its being an exposition of the present

position of medical and surgical knowledge in any civilized country, and, as it were, to add insult to injury, in his preface he states this precious work to be an epitome of the labours of the most distinguished of our continental brethren. In his preface he writes thus:—

"In this work, the fruit of twenty years of study, and of ten years of practice, we have described all that we have learned from Pinel, Landré—Beauvais, Corvisart, Petit, Chaussier, Bosquillon, Montaigue, Biett, Alibert, Laennec, Magendie, Husson, Cullerier, Lherminier, Honoré, Portal, Cayol, Itard, Esquirol, Leroux, Fouquier, Double, Recamier, Baron, Désormeaux, Guersant, Pelletan, Boyer, Dupuytren, Sanson, Dubois, Marjolin, &c., all able and celebrated professors.

"Since this period, 1843, we have placed under contribution the lectures, memoirs, monographs, and observations of the pupils and successors of the great masters whom we have just enumerated. To say that we have largely borrowed from all those who now-a-days occupy the foremost rank in the art of curing, is but to proclaim the intention that we have had of placing our work on a level with the science."

To state that he has faithfully given us *all that he has learned* from these great ones of the past, may be perfectly true; but to put this farce of a book forward as a sample of the present position of French medical science, is an insult to the talent and acquirements of a nation, to the scientific members of which we lie under too many and deep obligations, for us to pass it by in silence. Had he contented himself with giving us the formularies of the celebrated men, whose names he invokes to shield his compilation, we might have expressed a different opinion of his work; true, it would not be original, still we should have been grateful for his labours, and expressed ourselves accordingly. In it we find many formularies suggested and employed by these celebrated men, to whom in his preface he alludes, and it was the finding amongst those such a quantity of *Siropes*, *tisanes*, &c., that suggested our remarks on the taste displayed by our continental brethren for such simple remedies. Had M. le Docteur Foy confined himself to the collection and recording of such, we again repeat it, his work might have been tolerated; but even then it would have been inferior to many similar works long since placed at the service of the medical profession; but gravely to put it forward as a synopsis of medical and surgical science, is an assumption at which we are at a loss to know whether to laugh or be indignant.

Papers on Chemistry. By Maxwell Simpson, M.B., T.C.D. Formerly Lecturer on Chemistry in the Park-street, and the Original Schools of Medicine, Dublin.

Ueber zwei neue Methoden zur Bestimmung des Stickstoffs in organischen und unorganischen Verbindungen. Annalen der Chemie und Pharmacie Bd. xcv., p. 63.

Note concernant l'action du Brome sur l'Iodure d'aldéhydènë. Comptes Rendus, Tome xlvii. Séance du 1 Mars, 1858.

Sur une base nouvelle obtenue par l'action de l'ammoniaque sur le tribromure d'allyle. Annales de Chimie et de Physique, 3rd Série, t. lvi., and Philosophical Magazine, Oct., 1858.

Action du Chlorure d'acétyle sur l'aldéhyde. Comptes Rendes, Tome xlvii. Séance du 29 Novembre, 1858.

On the action of acids on Glycol. Proceedings of the Royal Society, Nos. 34 and 36, 1859.

On the Synthesis of Succinic and Pyro-tartaric Acids. Philosophical Transactions, 1861. p. 61.

The Medical School of Trinity College has been deservedly in possession of a high reputation for many years, and the study of experimental physics attracts more students at the University of Dublin, than at either of the sister Universities. Of both medicine and physics, Chemistry forms a most important part. We do not, however, see that, as regards that science, until the appearance of Dr. Simpson's papers, much has been done by any one, with the exception of Professor J. W. Mallet, of late years to remove the name of "silent sister," so often applied to our *alma mater*. There are no opportunities offered to the students of chemistry to advance their studies after they have taken out their degree, and until facilities for this purpose be provided, those who determine, in spite of difficulties to pursue the study, are obliged to repair to the Universities of France or Germany.

Of those who have followed this course, few have devoted themselves to the study of chemistry alone, and of these Dr. Simpson has distinguished himself by the variety and importance of his researches, as a glance at the foregoing list will show. We hail

these publications with the greater pleasure as they appear to increase in importance with every year. In fact, the latest of the papers, that on the synthesis of succinic and pyro-tartaric acids, is that which has in itself the greatest intrinsic value, and it affords us earnest of similar investigations being carried further and with still greater results hereafter.

We first find Dr. Simpson at work in the laboratory of the University of Heidelberg, under the auspices of Professor Bunsen, whose instruction has been sought by so many of our English chemists. He is engaged in the examination of certain azotised bodies which are very difficult of combustion. He finds the ordinary oxidising agent in organic analysis, oxide of copper, insufficient to complete the process of liberation of nitrogen; and, as the use of chromate of lead is impracticable, from the nature of the analysis to be performed, he is driven to seek for a substitute. The method of combustion with soda lime is unfitted for the purpose, in consequence of some peculiarities in the constitution of the substances under examination. He therefore tries the red oxide of mercury, instead of oxide of copper, and finds that it gives results which leave nothing to be desired. He gives two methods, of which one is *comparative*, the other *absolute*. The latter he finds applicable to the analysis of all the compounds of nitrogen, without exception.

We cannot attempt to give a description of the processes, but must refer our readers to the original paper, as, without the plates, it would be impossible to give an intelligible account of them. They have been thoroughly tested by Messrs. Gibbs and Genth (*Annalen der Chemie*, vol. civ., pp. 150 and 295), who have performed upwards of 30 analyses by them, which are remarkable for their accuracy. They are also incorporated in the last edition of *Fresenius's Text Book of Quantitative Analysis*, in which none but trustworthy methods are inserted. Nevertheless, we are of opinion, that, with the exception of the cases where the experimenter was precluded, as Dr. Simpson was, by the circumstances of the case, from employing the methods either of Liebig, or of Will and Varrentrapp, the processes he recommends will hardly meet with general use, as they require a good deal of manual dexterity in the fitting of apparatus. This, however, does not detract, in the least degree, from the originality and fertility of resource which are exhibited throughout the paper. Several of Dr. Simpson's subsequent investigations have been carried on in the laboratory of M. A.

Wurtz, in Paris, and have a reference, more or less direct, to the theory and properties of the poly-acid alcohols, for which that chemist is so justly famous. The first was carried on with the view of forming a glycerin, corresponding to ordinary alcohol, from the iodide of ethylene. This substance, whose constitution is $C_4H_4I_2$, yields a compound C_4H_3I, which is the iodide of acetylene. From the homologue of this body, belonging to the propyl series, M. Wurtz has obtained the terbromide of allyl $C_6H_5Br_3$, and from it has ultimately obtained ordinary glycerin, $C_6H_8O_6$. Dr. Simpson succeeded in forming a body which had the same composition ($C_4H_3Br_3$) as that sought for, with which, however, it is only isomeric, as its true rational formula is $C_4\left(\begin{matrix}H_3\\Br\end{matrix}\right)Br_2$. It is the brominated bromide of ethylene, and does not, therefore, correspond to the terbromide of allyl obtained by Wurtz.

Dr. Simpson next proceeded to carry on experiments on the terbromide of allyl, above-mentioned, and, by the action of ammonia on it, succeeded in forming a new organic base, which is di-brom-allyl-ammonia. Its formula is $N\left\{\begin{matrix}C_6H_4Br\\C_6H_4Br.\\H\end{matrix}\right.$ It is, accordingly, an imid base, in which the two equivalents of hydrogen are replaced by an equal number of equivalents of the mono-basic radical C_6H_4Br, (brom-allyl). The formation of the base was accompanied by the separation of bromide of ammonium in large quantities. In Dr. Simpson's first communication on this subject (*Comptes Rendus*, xlvi, p. 785), he was inclined to write its formula $N\left\{\begin{matrix}C_6H_5Br\\C_6H_5Br.\end{matrix}\right.$ According to this view it would be an *ammonium* in which the four equivalents of hydrogen are replaced by two equivalents of the bi-basic radical C_6H_5Br. A radical of this type C_nH_n is found to be bi-basic, while those of the type C_nH_{n+1} are mono-basic. He was, however, disposed to alter his views on the subject, by the discovery that the body under examination contained, at all events, one equivalent of replaceable hydrogen. On treating the base with iodide of ethyl, Dr. Simpson formed the hydriodate of ethyl-di-brom-allyl-ammonia. This base has the composition $N\left\{\begin{matrix}C_6H_4Br\\C_6H_4Br,\\C_4H_5\end{matrix}\right.$ and it has strong alkaline properties, being able to precipitate the

oxide of copper from its salts. Dr. Simpson was unfortunately unable, owing to the paucity of material, to complete his researches in this direction by the formation of a base corresponding to ammonium.

The next paper which we have to notice is very brief, it merely gives the result of an experiment made with a view of forming crotonic acid by synthesis. This acid is the second member of what is called the "oleic acid group," the typical formula of which is $C_nH_n—_2O_4$. The best known members of the group are oleic acid $C_{36}H_{34}O_4$ and acrylic acid $C_6H_4O_4$. The former is the essential acid constituent of almost all so-called oils. All acids belonging to this group are decomposed, on being heated with potash, and yield acetic acid among other products. Acrylic acid yields acetic and formic acids, as $C_6H_4O_4+2HO=\left.\begin{matrix}C_4H_3O_2\\H\end{matrix}\right\}O_2+\left.\begin{matrix}C_2HO_2\\H\end{matrix}\right\}O_2$.

Reasoning from these data, Dr. Simpson tried to form the next highest acid to acrylic, viz., crotonic $C_8H_6O_4$, by the action of chloride of acetyl on aldehyde. He tells us that he was led to make the experiment by the fact, that Bertagnini has formed cinnamic acid $C_{18}H_8O_4$ by the action of the oil of bitter almonds on the same chloride. In Dr. Simpson's case the experiment did not yield the desired results, as the bodies employed combined together without the elimination of hydrochloric acid, as he had been led to expect would be the case. The compound produced had the composition $C_8H_7ClO_4$, and Dr. Simpson was enabled to assign to it its true place and name in the course of his researches on glycol, which we now proceed to notice.

These investigations possess an interest far superior to that of any of those above noticed. The whole theory of poly-acid alcohols is of very recent date, and is, to a great extent, due to the labours of M. Wurtz. In the laboratory of this chemist, Dr. Simpson performed a series of experiments on glycol, the bi-acid alcohol, intermediate between the ordinary alcohols, which are mono-acid, and the glycerines, which are tri-acid. The most interesting compound which he obtained was one which is isomeric with that produced in the experiment last cited, and whose empiric composition is accordingly $C_8H_7ClO_4$. It is the "chlor-acetine of glycol," and is intermediate between Dutch liquid and the di-acetate of glycol. This is seen by a glance at the following formulæ:—

$C_4H_4Cl_2$

Dutch Liquid

$$\left.\begin{matrix} C_4H_4 \\ C_4H_3O_2 \\ Cl \end{matrix}\right\} O_2$$

Chlor-acetine of Glycol (Simpson)

$$\left.\begin{matrix} C_4H_4 \\ C_4H_3O_2 \\ C_4H_3O_2 \end{matrix}\right\} O_4$$

Diacetate of Glycol. (Wurtz)

The body isomeric with the chlor-acetine of glycol, which has been above referred to, is called by its discoverer "chlor-acetine of ethylidène," and belongs to the series derived from the hypothetic hydro-carbon ethylidène, isomeric with ethylene (olefiant gas). The former of these series contains aldehyde, while the body isomeric with it in the ethylene series is the oxide of ethylene, or ether of glycol, obtained by Wurtz. Dr. Simpson has followed up his discovery by the successive formation of a homologous compound, containing the radical butyroyl, and also of one containing benzoyl. He points out a process by which the two equivalents of replaceable hydrogen in glycol may be replaced by acid radicals, and has actually obtained the butyro-acetate of glycol. $\left.\begin{matrix} C_4H_4 \\ C_4H_3O_2 \\ C_8H_7O_2 \end{matrix}\right\} O_4$.

We now come to the last and most important of Dr. Simpson's investigations. There are two homologous series of monobasic acids, whose typical formulæ are respectively $C_nH_nO_4$ and $C_nH_{n-8}O_4$. Parallel with these, we find two series of bi-basic acids, represented by the typical formulæ $C_nH_{n-2}O_8$ and $C_nH_{n\ 10}O_8$. The first-named acids are directly connected with two series of the mono-acid alcohols, and it has long been suspected, that a similar relation existed between the bi-basic acids and the bi-acid alcohols or glycols. The credit of establishing the correctness of this surmise, belongs to Dr. Simpson. It has long been known, that the cyanide of an alcohol radical will yield, on being heated with caustic potash, the acid of the next higher alcohol, with the elimination of ammonia. By the use of this process, Becker has succeeded in forming the missing acid margaric $C_{34}H_{34}O_4$ from the cyanide of cetyl, and, theoretically speaking, we ought to be able to obtain, successively, all the acids and alcohols of the C_nH_{n+1} group from formic acid, were it not that the process of producing an alcohol from its own fatty acid is a very troublesome one.

Dr. Simpson first formed the bi-basic cyanide of ethylene $C_4H_4Cy_2$, a body which had never before been prepared, and treated this with caustic potash. The reaction which took place is represented by the following equation.—

$$C_4H_4(C_2N)_2 + 2(KO.HO) + 4HO = \left.\begin{matrix} C_8H_4O_4 \\ K_2 \end{matrix}\right\} O_4 + 2NH_3$$

Cyanide of ethylene — Succinate of Potash.

Dr. Simpson carried his researches further, and succeeded in forming the next higher bi-basic acid, pyro-tartaric $C_{10}H_8O_8$, by treating the cyanide of propylene $C_6H_6Cy_2$ by the same process as he had used with its homologue, the cyanide of ethylene.

This fact directly proves that the succinic acid group is directly connected with the bi-acid alcohols (glycols), and both are traceable to a series of bi-atomic hydrocarbons C_nH_n. The relations are strictly parallel to those of the ordinary alcohols and fatty acids, as may be seen from the following table:—

Mono-acid	Mono-basic	Bi-acid	Bi-basic
$\left.\begin{matrix} C_4H_5 \\ H \end{matrix}\right\} O_2$ Ethyl alcohol.	$\left.\begin{matrix} C_6H_5O_2 \\ H \end{matrix}\right\} O_2$ Propionic acid.	$\left.\begin{matrix} C_4H_4 \\ H_2 \end{matrix}\right\} O_4$ Ethyl-glycol.	$\left.\begin{matrix} C_8H_4O_4 \\ H_2 \end{matrix}\right\} O_4$ Succinic acid.
$\left.\begin{matrix} C_6H_7 \\ H \end{matrix}\right\} O_2$ Propyl alcohol.	$\left.\begin{matrix} C_8H_7O_2 \\ H \end{matrix}\right\} O_2$ Butyric acid.	$\left.\begin{matrix} C_6H_6 \\ H_2 \end{matrix}\right\} O_4$ Propyl-glycol	$\left.\begin{matrix} C_{10}H_6O_4 \\ H_2 \end{matrix}\right\} O_4$ Pyro-tartaric acid.

We do not hesitate to characterise this, as one of the most important discoveries which have been made this year. The nature of the papers which we have been examining, is such, that they do not well admit of criticism. They are simple statements of observed facts, and their bearing on other investigations is therefore easily shown. We have therefore deemed that the task of reviewing them would be best performed by giving a brief abstract of the contributions to chemical knowledge afforded by the author of the papers.

Lectures on the Germs and Vestiges of Disease, and on the Prevention of the Invasion and Fatality of Disease by Periodical Examinations. By HORACE DOBELL, M.D., &c., &c. London: Churchill. 1861. 8vo, pp. 198.

IT is not very easy to avoid doing Dr. Horace Dobell a very great injustice, and that, by taking his words from his own mouth at any

one part of his lectures. Dr. Dobell is a man who evidently can think, and not unfrequently to very good purpose; but, as is not unseldom with men of good abilities but somewhat defective training, he is at times as enthusiastic for a worthless plagiarism as for an entirely original idea. He has got to that stage of mental cultivation, whereat what is merely pseudo-scientific, is considered legitimately available for purposes of dilution; and possessing an excessive fondness for the first fruits of his brain, he imagines that his darlings will be more tenderly dealt by, and more affectionately received, through a bestowal upon them of grandiloquent appellatives, leading at least to the inference that their connexions are undeniably good.

Of a verity we believe, that were we not one of the most astute reviewers at present wielding the critical pen, we should have set down this book at once as one of those deceptive pieces of flimsy, passing muster only among a certain set of people, and credited by the lights of scientific institutions, by raw disciples of Comte and Michelet, and by the ladies who read at the museum in blue stockings and spectacles, with a capability of setting fire to the Liffey. There is that ingenious dovetailing of semi-scientific scraps, and so cunning a torturing of intricate phrases, that, as we have said, we began to think the whole thing was a sham. For we have an abhorrence of the growing vice of dealing with life from the equational point of view, which looks so very well on paper; of analyzing by simple mathematical rule whatever is subtle, inexact, and poetical in science. The phraseology of the X + Y school is, to us, cacophonous. We have a distaste for all such terms as coetaneous, correlative, antecedental, concurrent, quantitative, and the like, which glitter throughout the text like false diamonds on the shore, while the broad blue bosom of the ocean of truth spreads out so invitingly. Not but we are glad to find Dame Physic in good company, and getting on in the world; but she must be sparing of too free a use of the language of her betters, and be rather chary of the abstract and the concrete, the esthetical, the co-ordinate, and so on. "Madam," said O'Connell, to a female compatriot of our own, "you are a parallelopiped," and that was enough for her. Dr. Dobell talks of vitalized germs, antagonistic developments, and vital ultimatums, and is, we confess it, at times more than enough for us.

But to return to the shingle—

"According to the most recent statistics employed by actuaries, it may

be calculated, that out of every 100,000 children born, only 63,296 reach the age of twenty-five years; 36,704 dying from various causes before that age. If each of these 63,296 individuals has, at the age of twenty-five, produced one child and $\frac{7}{12}$ths, the number thus obtained will be only a fraction more than is sufficient to compensate for loss, and to bring the population up to the original quantity. In order, then, to keep up the population, the V.M.F., with which each individual was endowed at birth, must have accumulated at least $\frac{7}{12}$ths during life, instead of wasting, expending, or being consumed; otherwise, the individuals of each successive generation, would be endowed with a smaller quantity of force than their predecessors. And as, so far from the population being only maintained at a fixed quantity, it increases at a great rate, the accumulation of V.M.F., must be proportionately great. To fulfil this necessity of organic existence, we discern—or at least such is my hypothesis—that every living thing is given, 1st, a certain *endowment of V.M.F.*, with which to begin its career; 2ndly, *accumulators* of fresh force; the amount which it can thus accumulate being regulated only, *cæteris paribus*, by the requirements of the ultimatum."

The author in this paragraph intends to convey that the vital principle is derived and accumulated from the inorganic world; and that the amount of this principle or force transferred to the living being by its own organic actions, is proportionate to the necessity that claims its exercise in the external world, and which originates in the loss it is intended to compensate. That some species of transference does take place, is in harmony with the periodic demand every organised being sets up for nutrition; and it is scarcely a violation of analogy to suppose, that in the progress of the consumed material, from the condition of proximate principles to constituent elements, a condition or force transfers, (which may be estimated by the increase in vital and vitalizing phenomena, and the evident direct dependence of these upon the amount of food) serving to perpetuate function and endow matter with the *vis viva*. But how can such force ever come within the grasp of exact knowledge? and how can such a force be in any way dependent upon extrinsic calls for its exercise? Nothing, we allow, would so tend to demonstrate a prescience and forethought in nature as such a condition. Nor, indeed, could the intangible and wondrous attributes of the life-force more impress the reflective mind, did we even credit them with an association of so self-directing a character. But passing from the general to the special, we see no such mutual connexion and dependence. We observe that the most densely

populated districts are precisely those whose conditions, hygienic and moral, might be pre-supposed most antagonistic to life-force. And we see that the amount of such force called into existence is greatest where no apparent necessity claims its exercise, and where, on the contrary, the strongest possible numerical and social reasons present themselves for its limitation. It is evidence, nevertheless, of a reverential spirit, which does our author credit, to believe that the amount of force which a given individual can accumulate, depends on its requirements for the attainment of its ultimatum, and the proof of such a law would sweep away many apparent obstacles to the harmony of science and theology.

But the adaptation of the powers for securing the attainment of the ultimate object held in view at the first moment of being, can scarcely be believed to be modified by conditions and requirements, which, of whatever importance to the philanthropist and the statesman, weigh but little with the master-worker. That the capacity for repairs under injury exists; that, as in the insect tribes, there is to be witnessed a power of reproduction, bearing it would strikingly seem some definite proportion to the waste of life occurring in the offspring, is true; but it is scarcely legitimate to conclude —"That under every condition proper to the different epochs of an animal's life, the formative or productive force is sufficient *in every respect to the necessities of the case.*"

By the term *ultimatum*, our author would convey the consummation of the design in view at the formation of the animal. From this aspect the ultimatum may be supposed to be attained by the insect, when it has secured the multiplication of the species in the form of the necessary number of ova. The ultimatum there being reproduction, the force in question may properly be styled reproductive; and doubtless in each individual a definite relation can be traced between such force-manifesting power, and the requirements of the species. Even here, however, a discrepancy is apparent. It is, evidently, as much a fixed law that bees should kill each other *en masse*, when the queen bee is impregnated, as that they should lay large numbers of eggs. Is the force then at the creation of the bee nicely calculated to meet the requirements of a purposeless waste of it, which is as evidently pre-determined? The inexactness of Dr. Dobell's conclusion becomes more manifest still, in the case of man. His ultimatum, evidently, is not attained with the multiplication of his species, but only when those duties and functions have been fulfilled which an intellect entails and enables him to

discharge. If the force be proportionate to the ultimatum, it is evident, here, that its nature must be so complex as to remove it from the scope of pure reason; and that, as both the duties and functions of man vary in their nature and performance with collateral influences of chance and education, they cannot be derivable from the force imparted antecedental to them, unless that force be capable of leading its possessor to the attainment of an ultimatum altogether different under different successions of collateral accidents.

To this force, "in one and all of its vitalized modes of manifestation," Dr. Dobell applies the symbol V.M.F., vitalised mode of force. If the reader can understand this, he will enter with Dr. Dobell into the spirit of the "L.M.F.," or "lifeless mode of force." By *modes* Dr. Dobell understands what Locke seemed to understand, viz., "such complex ideas as, however compounded, contain not in them the supposition of subsisting by themselves, but are considered as dependencies on, or affections of substances." That is all very well. Of course every one of our readers has sufficient V.M.F. to enable him to attain this ultimatum. Dr. Dobell is scarcely to be blamed, for ourselves desponding with respect to the ultimatum, in an excess of the L.M.F. In the quotation we started with, we found every one of 63,296 individuals possessed an excess of V.M.F., to the value of $\frac{7}{12}$. Bearing this in his mind, the reader may proceed to grapple hopefully with the "succession of transferences." The "force" is present, but it must (we follow the author,) be directed in a certain way and accumulated in a definite manner. The evolution of the radical and first leaves from the seed, is evidence of an accumulation of force and material from the inorganic world; and, as in the vegetable, so in the animal, all are "provided with the power of accumulating by osmotic action." On this provision of accumulators depends the transference of force from the food to the being, and the conversion of simple unorganised to complex organic principles.

"It may be stated then, as a conclusion from these premises, that the V.M.F., in the highest animals, is continually accumulated by a *succession of transferences* from the organic world by which they are surrounded. It is then no more than a postulate"—query axiom—"to affirm, as I venture to do, that in this manner the constitution of the animal, both in material and force, will be dependent on the conditions of the world in which it exists, subject to alterations correlative with those of that external world itself."

Some of this accumulated force passes by the next step in the

hypothesis into the "germs of the vitalized being." The V.M.F. "passes in," and "the body having provided for its decendants the force necessary to the commencement of their vital career, makes the world at large its residual legatee." The legatee comes into this little property with mingled feelings; for part of it only admits of investment, the residue being accumulated for the benefit of succeeding generations.

By means of this hypothesis Dr. Dobell is enabled to reconcile the apparently antagonistic operations of generation and development. In Dr. Carpenter's view these phenomena are, of necessity, opposed; for a diminution of the germinal capacity attends every act of development, while the act of generation renews it. Dr. Dobell, on the contrary, believes that no loss of vital energy has been sustained through the budding; but that this extension has been co-equal with the accumulation of V.M.F., which has "been determined in another direction consistent with the conditions of existence, in obedience to the law for attaining the ultimatum." Dr. Dobell does not hesitate to believe that his hypothesis lends dignity to the law of the conditions of existence of Cuvier, and a new importance to Mr. Darwin's theory of natural selection.

At first sight the connexion between the germs and vestiges of disease, and V.M.F., might be thought to be somewhat obscure. The practical conclusions, therefore, of Dr. Dobell are not without their value.

"1. That the vestiges of disease, coetaneous diseases, and the conditions of life, may determine the efficiency or non-efficiency of the V.M.F., to prevent or arrest the invasion and progress of premature destructive changes in the organism, to secure its repair when damaged, to produce an offspring, to endow that offspring with V.M.F. of normal quantity and quality.

"2. That abnormal conditions of the V.M.F., either congenital or acquired, may be changed by changes in the conditions of life, and by means which exert an influence on the vestiges of disease; and that the influence of such changes may affect not only the individual but a succeeding generation."

We have hinted that, in our opinion, Dr. Dobell can think, but cannot lucidly express his ideas. His science partakes of the hazy, the metaphysical, the unpleasing. In like manner Dr. Dobell can write; but when he takes to word-painting, his pencil disdains all attempts at control. The third lecture of our author takes us into the

realms of sweetest fancy and gushing innocence, but the fancy is overdone, and the innocence smacks of the rouge-pot. It opens like the scene in Don Giovanni. Zerlina is tripping about in the shortest of petticoats, and Masetto chirps in the most dulcet of strains. Here and there the monster of the drama shows his white legs, but he does not forget his guitar. The V.M.F. enters once or twice and disturbs the peace of mind of the audience; but he is in this act so insinuating and so gentlemanly, that we almost forget what a villain he is, and how he is bent on robbing the girl of her virtue. The synopsis of this lecture looks not unlike the exciting and condensed account of the costly extravaganza of Pretty Prince Pastoral, or Oranges and Lemons and the Twelve Dancing Princesses. The good genius of the play asks us to forget the "grim walls," and the chains, and the beaten paths of our orthodox prison, and gallop "across country" in search of medical truth, with an utter disregard, be it noted, of the selfish interests of all "proprietors of hedges, fences, and ditches." Whereby hangs a parable.

"You are so perfectly familiar with that road which leads from the village to the wood, up which you have so often sauntered; you know quite well the path to the mill—your favourite evening walk. But I shall just trot you up the lane at the end, and show you over that thick hedge on the bank, when you will see that your road to the wood and your path to the mill run so nearly parallel and so close together, that the road will take you to the mill, and the path to the wood, by a very slight turn indeed. I shall take you a gallop to the lake in the valley, which you always believed had its source in that swampy wood on its higher bank; and we shall then climb the hill to your favourite well under the beech trees, and to the little stream that runs from it, and loses itself under the rocky side of the mountain ridge. You know these spots well from childhood; but I shall take you through the brambles and furze on the ridge, and down through the quarries on the other side, and show you your little stream gushing from the rocks again, and tumbling down the hill-side to the swampy wood. I shall not be stopped by notice-boards, warning off trespassers, or by your legends of the dangers of the place. We shall be careful of our footing, however, and perhaps dismount and lead our horses slowly through the worst of the stones; but down we must go in spite of them, and prove to you that it is your favourite well under the beeches after all, which makes the wood a swamp, and fills your fine lake in the valley.

"I am convinced that you are wrong, notwithstanding the testimony of your oldest inhabitants, when you tell me that the church on the hill, to which you have walked every Sunday these twenty years, marks the

highest point in the county. It certainly looks from your village and from your usual rides as though it might; but come with me across the country, and, screened by those tall trees which appear to skirt the horizon, I will show you a hill almost up to their tops, from which your church is seen enveloped in the valley mists.

"Now change the scene, and return to life in town. Let us take our course across the ups and downs, the quick-sands and the thorns, which beset the study of disease and health. It is still a cross-country route I wish to take you; but don't misunderstand me—don't suppose that I wish you to leave your 'hand-books' behind, or to forget one item of what you have learnt about the usual ways and by-ways, the well-known objects of interest, and the public places. No guide is justified in penetrating to the interior, till he has learnt all the roads well worn by his predecessors, so that he may recover the safe track if he finds himself getting into danger."

The several characters in this *chasse au canard* are, Patient number one, who

"Enters while we speak. Be still, and observe his agitated address, the flush about the forehead and upper part of his face, the unsteady eyes wandering about, as though in search of words sufficiently expressive to impress us with the importance of his case.

"Mark especially the peculiar falter in his speech, by which a syllable or word is now and again dropped, as though the force from behind suddenly failed, and the sound went back into the larynx instead of being uttered."

Then a

"Corpulent flabby old lady, who has a symmetrical patch of psoriasis on each leg; and is, as she calls it, 'teazed to death with erysipelas of the ears and sides of the head.' We soon find that instead of erysipelas, it is eczema; and in one of her eyes we see an advanced and very yellow cataract."

Next

"A little child, with large grey languid eyes, and a very white skin."

Who subsequently turns out to be the wrong patient, since it is not she but her mother who wants advice.

Then the lady herself. She was 30 when she married, and

"Her marriage had been postponed, to suit the wishes of her parents, that she should wait till her intended husband had attained a certain position in society, and could bring her a liberal income."

Next

"Is a gentleman of 60, the proprietor of quarries in Wales, and a director of several companies in London, a very active, energetic man. But those occupations require that he should frequently travel long journeys by rail, and be able to sit out protracted board meetings." &c.

Ladies with quivering lips; short breathed men; children with the measles; and a retired baker.

Need we observe, that all this leads at last to the transformation scene, where Prince Pastoral marries the Princess Discretion, in a blaze of blue fire, pointing with his wand to the "wells and springs of disease," amidst thunders of applause.

At length, however, Dr. Dobell pulls up his hobby, and dropping his metaphors and his word-paintings, proceeds to work in a manner more creditable to the thinker and the physician. For, unless the book aims at the public, we hold that the text we have just skimmed over is such as it would be flattery to call valueless. The author's purpose is to insist on the necessity in all cases at definite periods, of searching for the germs and vestiges of disease. This necessity, he is desirous to show, springs from the intimate dependency and mutual connexion of diseases one with the other: that diseases of serious character frequently are to be traced to first germs, apparently but trivial in themselves; and that disease is acquired and entailed by a non-eradication of the slight vestiges which, in most cases, after a disease, linger in the system. It is to the pre-existence of germs and of vestiges, "to this class of changes, to these vestiges, and vestiges of vestiges, together with the conditions of life, that we have to look for the real causes of mortality in disease."

We think none the worse of all this, that we knew it all before. Of course, if a child have the dropsy, a shrewd guess may be given at the vestiges of scarlet fever. If a young lady is coughing and thin, a natural inquiry may be hazarded after parental phthisical germs. If a third have a venous pulse, it would be nothing very wonderful for a physician to seek for the cause in a remote rheumatic fever. But this is not sufficient to recommend the profession to attend to; the prodromata are scarcely worth writing a book about, but to caution us against overlooking "the state of the correlative parts;" and "the quantitative and qualitative state of the V.M.F." is altogether a different business. It is not enough that a practitioner should use his common sense, remembering, what we

should think, no one with common sense could, by any possibility, forget—that disease produces disease—but, he must in every case, keep his eye upon the V.M.F., and the "essential antecedent or E.A;" for the V.M.F. "may be brought to various degrees of defectiveness," and the E.A. may, "in a certain number of cases, be in excess of any possible condition of the V.M.F., either to protect against the invasion of disease, or to prevent death." Nor will the etiology of the disease be understood unless he bear in mind "the essential antecedent—the causes of the essential antecedent—the pre-disposing antecedents—the causes of these pre-disposing antecedents—the causes of fatality—the causes of these causes—and the vestiges."!

Passing on to lecture four, we discover the bearing of the principles laid down in the preceding lectures. We have etiological analyses of typical diseases, which we hope may prove valuable in emergencies and at the bed-side. We doubt much, however, whether the obscurity attending the differential diagnosis of continued fevers, is in any way lessened by the light afforded by both the V.M.F. and the E.A. The pre-disposing antecedent of typhus is said by Dr. Dobell, to be a "defect in the V.M.F. compared with the quantity and quality of the E.A. to which the individual is exposed." Its cause, we find, resides in an excess of the E.A. over any possible condition of the V.M.F., while the fatality of the disease "is most influenced by the volume and intensity of the E.A. and defective V.M.F." Furnished with these valuable axioms with respect to continued fevers, we may proceed to extend our knowledge of apoplexy and paralysis, by following Dr. Dobell into the varieties of the E.A. The wisest may occasionally hesitate, both as to diagnosis and treatment in these cases. It cannot therefore but be productive of the greatest advantage, where there exists a doubt as to the rigidity of paralysed muscles, or the existence of a clot, or the presence of white softening, or the epileptiform nature of a seizure, to bear in mind with our author, that apoplexy results from an "arrest, permanent or temporary," in one or more of the functions of some part or parts of the cerebro-spinal system, caused by a toxic E.A., a mechanical E.A., or a degenerative E.A.

The prophylaxis is further much assisted in an anxious patient, by observing a defect in his V.M.F.; and in the event of decease, it cannot fail to prove of much solace to the relatives, to learn that the cause of the untoward event was to be ascribed to (A.) excessive defect in his V.M.F., compared with the quantity and quality of

his E.A. or (B.), which is "the most usual cause of fatality in apoplexy," an excessive defect of some part of the organism, independent of the influence of such defect on the quantity or quality of the V.M.F.

We dwell, and we regret but briefly, upon the etiological analysis of heart disease and pericarditis, which are found to bear an important and hitherto overlooked analogy to apoplexy and paralysis, if we may judge by the identity of their respective varieties of the E.A., which are again observed to be toxic, mechanical, and degenerative. Here again should a patient desire to ward off these affections, it is essential he remedy the defect in his V.M.F., which is their pre-disposing antecedent. To the medical body at large who are used to consider the causes of fatality in these diseases as originating in obstructed circulation, dropsy, and such like, it will be a source of much anxious reflection to know, that they have been altogether oblivious of the "excessive defect of the V.M.F. compared with the quantity and quality of the essential antecedent," concerning the "cause of which cause," it should be remembered, that "the E.A. may be in excess of any possible condition of the V.M.F."

In like manner we would commend Dr. Dobell's views upon gout and rheumatism to the serious notice of Drs. Garrod and Fuller, in whose works, by an inexplicable oversight, there is not so much as an allusion to the important dependency of these diseases on the V.M.F. and the E.A., which, if we consider their fatality, has a bearing, happily unfrequent, on "the cause of its cause," since "in very rare cases the E.A. is in excess of any possible condition of the V.M.F."

This constant antagonism of the V.M.F. and the E.A., to say nothing of the L.M.F., is very lamentable, and the more so, that like many other couples at variance, they cling to one another with a certain fondness which precludes the interference of a third party. This is the more to be deplored as such a state of things cannot fail to exercise a very depressing influence on therapeutical medicine.

Dr. Dobell is no less entitled to the credit due to having first called attention to this subject however, than for the industry with which he has garnered materials for the fifth lecture. Twenty-two out of the thirty-seven pages of which this lecture is made up, testify to Dr. Dobell's thorough freedom from bias, and his modest appreciation of the text of no less than eighteen authorities, not forgetting the *Times* and the Registrar-General. The accumulation

of so great a weight of evidence is irresistible, and we trust that for the future few will be found to deny that syphilis, fatty degeneration, and anæmia, are very prolific sources of disease.

"Here, Gentlemen, we find ourselves, at last, near the end of that cross-country ride, which I sketched out in my third lecture. We have explored some of those different roads leading to the same end; we have discovered that some of those hills that appear to skirt the horizon, may descend into the mists of the valley when seen from another point of view. We have traced the lake, the stream, and the quicksand to its source. In spite of some difficult ascents, some uncertain footings, and many tangled paths, we have at length arrived at those *wells and springs of disease and death*, which we are so apt to neglect while busy with the disasters of which alone they have been the cause.

"Gentlemen, we are all members of a *practical* profession. We have taken upon ourselves high and responsible duties, all culminating in action. So long as we choose to assume these duties in a profession, as yet so far from perfection, we are not justified in spending our time in scientific investigations or speculations, unless they have for their end some practical application *for the good of humanity*. It is the hope of attaining such an end which has led me on in the design and labour of these lectures.

"I think that such an end, such a practical application of the conclusions at which we have arrived, stands out plainly and unmistakably before us. I hope, Gentlemen, that in your own minds you have anticipated me in coming to the same practical conclusion that I have arrived at myself." . . . . . .

"The conclusion at which I now arrive is this, that man may be the instrument through whom *the capability of accomplishing these ends may be preserved and restored to the organism.*

"The manner in which man is to exercise this instrumentality is the next point for our consideration. But I think we have almost reduced it to a necessary conclusion. For as we have plainly seen that the organism is competent to take care of itself, provided that it possesses a normal V.M.F., and is surrounded by normal conditions of life; and as we have also seen that the great causes of defect in the V.M.F., are *the vestiges of disease and abnormal conditions of life;* and as we have also learnt that the diseases, from which the vestiges result, are *invited* by defects of the V.M.F.; and that when thus invited and received into the organism, they are capable of being disposed of without leaving vestiges behind, if the V.M.F. is free from excessive defect; that thus these vestiges are due to defective V.M.F. And as we have learnt that the earliest invasion of defects in the V.M.F., upon which all the long and intricate succession of ills depend as their germ—as we have learnt, I say, that this state of

germination exists at a period anterior to the manifestation of disease in its ordinary characters, and that it is to be found in the garb of slight impairments to the general health, the indications of which are more and more evasive and occult, the earlier the *stage of germination;* and, finally, as we have learnt that it *is in this occult and evasive stage of germination that the defect is most easily and most efficiently to be remedied;* I think you will agree with me in the practical conclusion at which I have arrived." . .

"I wish, then, to propose, as the only means by which to reach the evil, and obtain the good, *that there should be instituted, as a custom, a system of periodical examination, to which all persons should submit themselves, and to which they should submit their children.*" . . . . . .

"The examination should be reported in writing; and, after due consideration, such advice must be given as a careful judgment may dictate, for the future conduct, pursuits, and habits of the patient, with a view to correcting any defects, or tendency to defects, in the organism. Advice must also be given as to the means of removing any vestiges of disease that have been detected, or if they are not removable, advice as to the best way of overcoming their influence, or of averting their increase. To this must be added precautions to be adopted in certain contingencies, which, according to the judgment of the case, appear probable." . .

"The next question is, then, what would be the effect *upon the profession* in a pecuniary and in an ethical sense. With regard to the pecuniary question, it is only necessary to observe that of course I do not expect that any man in good practice, whose time is profitably employed, could conduct such an examination and give such advice for the usual consultation-fee. That is, of course, out of the question. Every man who attempts to follow out the plan, will, I hope, require such a fee as shall enable him to give the necessary time and consideration to every case."

Have we not proved what we started at first by saying, "that it is not very easy to avoid doing Dr. Dobell a great injustice; and that, by taking his words from his own mouth."

Aspirations from the Inner, the Spiritual Life; aiming to reconcile Religion, Literature, Science, Art, with Faith, and Hope, and Love, and Immortality. By HENRY M'CORMAC, M.D. London: Longmans. 1860. Cr. 8vo, pp. 370.

Les Médecins Moralistes Code Philosophique et religieux, extrait des Ecrits des Médecins anciens et modernes notamment des Docteurs Français contemporains. Par MADAME WOILLEZ. Paris: Baillière. 1862. 8vo, pp. 399.

IT does not come legitimately within our province to notice ethical

works, but those now before us present a peculiar claim to our attention, not alone from their beauty and excellence, but as being the utterances of our professional brethren, the first being from the eloquent pen of Dr. M'Cormac, of Belfast, and the other a collection of beautiful thoughts, collected by Madame Woillez, from the writings of our French confreres.

Dr. M'Cormac describes his book, and most truly, as not a sectarian book. It is simply, he says, the inculcation of spiritual truth, a spiritual religion, and a spiritual God; aspirations from the inner life, the life we do not see, but which, not the less, "resumes" our experience here, and, in a degree, the experience which is to come. For the earthly is in correspondence with the celestial life, and the spiritual truths of the present are also true for ever. He would raise, or strive to raise, each weary anxious heart straight to highest heaven. He would unite the beautiful, the elevated, the good, the pure; reconcile religion, literature, science, art, nay, every precious and excellent thing, too much estranged, with religious trust and religious truth.

Right noble aspirations these, and right faithfully worked out. The task is one for which the education, the habits of thought, and the experience of life and death of a physician peculiarly fit him. The book reminds us of the proverbial philosophy of Tupper, but is immeasurably superior to it by its profundity, its learning, and the genial and catholic spirit it breathes.

Madame Woillez is a well-known and highly-esteemed authoress. Before withdrawing into repose, she was desirous of removing from the medical body the accusation of Atheism and Materialism, so often formed against it, and, for this purpose, devoted the last three years of her life to reading the writings of physicians, "elle parvint, abeille patiente, à en extraire les sucs les plus purs et à composer un véritable Code Chrétien, uniquement dû à cette même classe d'hommes que l'on prétendait dénués de sentiments religieux." The collection of maxims, thoughts, and reflections, that she has drawn from the writings of physicians, ancient and modern,—but chiefly contemporaneous Frenchmen,—makes her book one well worthy to take its place beside that of our countryman.

PART III.

MEDICAL MISCELLANY.

Reports, Retrospects, and Scientific Intelligence.

RETROSPECT

OF THE PROGRESS OF SURGERY DURING THE LAST DECADE.

BY

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SURGICAL PATHOLOGY.

It is impossible that advances could have been made in physiology, such as the last ten or twelve years have witnessed, without a proportionate increase in our knowledge of the principles on which we must combat disease. I have no wish to encroach upon a province which does not come within my domain; yet, their boundaries being conterminous throughout a great extent, I find it impossible to avoid a reference to physiology while engaged in the consideration of the present condition of pathological knowledge.

If I might venture to epitomise the prevailing views of the principles and forms of life, I would say that, as regards the former, life is now looked upon less as a combination than as a correlative of the physical forces, and that the forms of life are deducible from one common type.

Life comes to be recognised, not as electricity or galvanism, not as heat or chemical action, nor yet as a combination of any two or more of these, but as a condition of matter (I am not now speaking of the life of the soul) changeable, under certain circumstances, into any of the other forms of force, allied to all, identical with none. Ultimately we must refer it, equally with all other physical forces, to the upholding will of the Creator.

In the words of Grove,[a] "Causation is the will, creation the act of God." The deduction of the various forms of life from a common type forms the basis of the theories of Darwin[b] and of Freke,[c] and may be found in a more practical form in almost every page of *Virchow's Cellular Pathology*. In the 27th page of this work, as translated by Dr. Chance, we find the following exposition of the doctrine:—

"At the present time, neither fibres, nor globules, nor elementary granules, can be looked upon as histological starting-points. As long as living elements were conceived to be formed out of parts previously destitute of shape, such as formative fluids *(plastic matter, blastema cytoblastema)*, any one of the above views could, of course, be entertained; but it is in this very particular that the revolution, which the last few years have brought with them, has been most marked. Even in pathology we can now go so far as to establish, as a general principle, *that no development of any kind begins* de novo; *and consequently as to reject the theory of equivocal* (spontaneous) *generation just as much in the history of the development of individual parts, as we do in that of entire organisms;* just as little as we can now admit that a tænia can arise out of a saburral mucous, or that, out of the residue of the decomposition of animal or vegetable matter, an infusorial animalcule, a fungus, or an alga, can be formed; equally little are we disposed to concede either in physiological or pathological histology, that a new cell can build itself up out of any non-cellular substance. Where a cell arises, there a cell must have previously existed (*omnis cellula a cellulâ*), just as an animal can spring only from an animal, a plant only from a plant. In this manner, although there are still a few spots in the body where absolute demonstration has not yet been afforded, the principle is, nevertheless, established, that in the whole series of living things, whether they be entire plants, or animal organisms, or essential constituents of the same, an eternal law of continuous development prevails. There is no discontinuity of development, of such a kind that a new generation can of itself give rise to a new series of developmental forms. No developed tissues can be traced back either to any large or small element, unless it be unto a cell."

In this doctrine of *omnis cellula a cellulâ* is contained the germ of the advances of both sound physiology and pathology.

Virchow has elaborated the doctrine in its multitudinous bearings upon the healthy and morbid actions of the human body. One by one he has taken the various constituent elements of the tissues, and has traced them

[a] Correlation of Physical Forces, by W. R. Grove, Q.C.

[b] Darwin on the Origin of Species. 1860.

[c] Freke on the Origin of Species. 1861.

I must not be understood as expressing any opinion on these theories. I have merely referred to them as expressions of prevalent opinions.

up to a common source—the cells of connective tissue; bone, muscle, nerve, skin, tendon, and fat, all own a common parentage; and, as there will be occasion to show further on, all morbid elements are derived by him from the same source.

In this view of the community of origin of cell-elements, there is a wonderful convergence between independent observers. As regards physiology, it must be left to others to follow out the subject, while here it is endeavoured to show its general bearing upon surgical pathology.

As life, in its relation to matter, appears to be a correlative of the forces of heat, motion, electricity, chemical affinity, &c., so the deviations from health seem to consist in the intermixture of one or other of these forces with the force of life.

Prior to the last decade, the chemical processes of degeneration of tissue became dimly known to us through the writings of Müller, Henle, Goodsir, and Reinhart. To the latter especially are we indebted for the first outline of the process by which albuminous tissues part with their vitality, and, becoming amenable to chemical laws, are converted into oil (by removal of their nitrogenous element),[a] prior to their final absorption. The identity of this decomposition with what occurs in disease was made out by Quain and Wagner; but it is especially to Virchow that we are indebted for thoroughly systematizing the entire range of fatty degenerations. He gives to the changes of which this is the principal, the term of *necrobiosis*, which he explains to mean "death, brought on by (altered) life—a spontaneous wearing out of living parts—the destruction and annihilation consequent upon life—natural as opposed to violent death (mortification)."

It is not necessary to follow Virchow through the minutiæ of this subject; it is sufficient to point out how, in the typical writings of the past decade, life is looked upon as a condition, not as an entity; and disease as a disordered condition.

The all-important signification of these views for the right comprehension of most morbid processes, and, above all, of the dyscrasiæ, must be too evident to require further amplification.

Men are now accustomed to look for the seat of life, not in any one central organ, whether the distributor of a grosser or of a more subtle (supposed) fluid, nor in the blood itself, nor yet in the tissues alone; but in all parts of the body in proportion to the activity of the changes which are the evidence of life. As a necessary corollary of this view of life, we look upon disease, not as a disturbing element, introduced into the blood or the tissues, but as a disordered condition of structure, sometimes produced, it may be, by the introduction of morbid material, often without

[a] Michaelis (Prager Vierteljahrschrift, 1853) has supplied this missing link, by showing that ammonia is developed during the oily metamorphosis of albuminous tissues. Simon in Holmes' System of Surgery.

such introduction, but always of more importance than any such material virus; and to be treated by medicines and means, such as will enable the natural excretory organs to eliminate the dead or disordered tissue, and not by drugs, which are to act as direct or chemical antidotes to a poison.

Hence, for example, in syphilis, the use of mercury, where it is used at all, is modified materially by these views. Men, at least sensible men, do not now deluge their patients with mercury as a specific, which is to circulate through the capillaries, or enter into the tissues and annihilate a syphilitic virus where it meets with it—a doctrine propounded not many years ago by some of the ablest teachers in the land; but they give it, even when they rely too exclusively upon its powers, as an eliminator of dead or disordered, or enfeebled tissues. No doubt there are forms of the disease in which it surpasses all other known excitors of the eliminating organs (such, for example, as congenital syphilis), but for all that, it is year by year more universally acknowledged that other means will cure the primary disease, and that mercury cannot insure immunity from secondaries, no matter how carefully and to what extent it be exhibited: hence the inevitable conclusion that it is not an antidote in the old sense of this term; and so with other diseases and other remedies. As the former cease to be looked upon as entities, so the latter cease to be regarded as specifics. Such advances in pathology then are not to be despised, seeing that they open the way for sound principles of treatment.

A pregnant source of progress in modern surgery (and medicine) is to be sought in the tendency of men to individualize disease. As the functions and forms of life are found to present as many aspects as there are individual men, so are the disordered functions and forms of disease; families, and groups, and classes, may be made for the convenience of instruction; but year by year the great truth is more widely recognised, that diseased action is as diverse as man; and the results which spring from this truth are of immense and wide-spread importance.

Two causes seem principally at work in the production of this view of disease. The great extent and accuracy of microscopic investigations, and the increase of medical journalism. As, in many other great changes, the agents who have brought this about may have been, to a great extent, unconscious of the tendency and effects of their labours. Thus, some five years ago, a grand controversy raged in Paris on the subject of microscopic investigations, and if we were to judge of their value by the conflicting opinions which were then evoked, or by the absence of any definite formulæ as their recognised result, we should be obliged to conclude that their contributions to science had been uncertain, and that their practical importance was of the very smallest amount. And yet how many errors, and, what is of more importance, how many sources of

error were discovered and got rid of by this discussion, how firmly it enabled us to grasp the truth, and to wield it for future use. Many hasty generalizations—many crude and ill-digested speculations—many theories founded on a too narrow basis, or resulting from incorrectness in manipulation, were here disposed of, and, when the angry tide of debate had ebbed, men's minds settled down to realize the true results of the discussion.

The most important of these was the infinite variety of morbid growths, a striking example of the individuality of diseased action. Discoverers are always apt to generalize too soon and from too narrow premises: hence the microscopists of the previous decade laid down with too great rigidity the characters of morbid cell-elements; the cancer cell, for example, was not only characteristic of the growth in which it forms the principal element, which is true, but it was heteromorphous, foreign to the body, of parasitic, or at best unknown origin. Each successive observer of the structure of tumours has pointed out peculiarities unnoticed before, and perhaps has founded a new species or variety of growth, insisting mainly, it may be, upon the differences between what he has seen, and what others have put on record as the results of their observations. Gradually the varieties are so multiplied that the shades of difference between them become less and less broadly marked, and men's minds suddenly open to the conviction that these numerous peculiarities point to a common origin, modified by individual influences.

The expansion of medical journalism is connected also with this increasing tendency to individualize disease. Whether as cause or effect may be a matter of opinion. Certainly there is a constant stream of cases and observations ready to fill the pages of every journal, and each writer strives for originality, or at least for some peculiarity in the cases he records.

As before remarked, there is a wonderful convergence of opinion on the common origin of morbid products. We find independent observers, who had followed different routes, arrive at the same conclusions.

Virchow, for example, in page 445 of the already quoted work, when speaking of the origin of pus, says:—"If now, in the next place, we investigate the history of suppuration, we immediately discover that we must distinguish two different modes of pus-formation, according, namely, as the pus proceeds from tissues of the first two kinds mentioned in our classification, *i.e.*, from epithelium, or from connective tissue." He had previously spoken of the origin of the former from the latter, so that ultimately the pus cell would derive its origin from the connective tissue corpuscle; further on he shows how—"deeply-seated pus-formation regularly takes place in the connective tissues. In it there first occurs an enlargement of the cells, the nuclei divide and for some time multiply exceedingly," &c., &c.

Again, speaking of tubercle, he says (p. 94) :—"If the development of these corpuscles be investigated, it is easy to convince oneself that wherever they occur they arise out of previous organic morphological elements, and that they are not by any means the first bungling products, unfortunate essays of organisation; but that they were once well-grown elements, which, by an unhappy chance, were early checked in their development, and early succumbed to a process of shrivelling. You may with certainty assume that where you meet with a largish corpuscle of this description, a cell had previously existed; and where you find a small one, there once had been a nucleus, enclosed, perhaps, within a cell. . . . I am of opinion that tubercle is necessarily of a cellular nature, and generally, just like all new formations, has its origin in connective tissue."

Again, not to be tedious, in page 454, he has a figure which represents the development of cancer from connective tissue in carcinoma of the breast, showing the various stages of the process in the division of the nuclei, then of the cells, their grouping together and enlargement. He also asserts similar stages in the development of cancer, cancroid, and sarcoma.

Here we see the ablest foreign microscopist and pathologist of the day deriving the principal morbid products from one common element—the connective tissue corpuscle. Let us now see how our greatest British authority treats the same subject:—

"One cannot but conclude that the cells of pus from wounds are ill-developed or degenerate granulation cells. . . . The many characters of imperfection or of degeneracy that pus-cells show accord with this view; such as the general imperfection of their nuclei; the frequent abundance of fatty-looking granules in them, the large quantity of fatty matter that analysis detects in pus, and the limitation of the cells to certain forms, beyond which they are never found developed, though none of those forms is more highly organised than that of the youngest or most rudimental granulation-cell."[a]

It is strange that one who could speak so plainly of the parentage of the pus globule should not have perceived the affinity of tubercle and of cancer to the same elementary cell; but he goes close to it with Schrœder Van der Kolk, whom he quotes, as referring pulmonary tubercle to the degenerate epithelium of the air cells.

Dr. Wilks,[b] in a paper on cancer and new growths, expresses his opinion that these have their origin in a "purposeless effusion of blastema," which material, in healthy subjects, would become organised for repair or healthy growth, but in the unhealthy is converted into unnatural forms. He boldly proclaims both the local origin of cancers and the influence of

[a] Paget's Lectures on Surgical Pathology, Vol. i., p. 233.
[b] Guy's Hospital Reports, Vol. iv.

the constitution of the individual, but in terms too diffuse for quotation.

If I venture to introduce into such distinguished company the words of one who claims to be only a diligent observer of the microscopic elements of tumours in connexion with their clinical history, it is because they express what, as regards this branch, seems to be the result of the labours of microscopists in the past decade:—

"Of growths which are not cancer, but which equally with it have their origin in the lymph-cell, and are interstitial or infiltrating, there are almost as many varieties as there are cases. After reading most of what has been written about them, and having seen a good many, I am satisfied that this whole class may, for practical purposes, be included in the following formula:—'*The nearer in form and power of development that the constituent cells of a tumour are to the healthy lymph-cell, the more innocent is the tumour: the further removed, the more destructive.*' Thus we find the healthy lymph-cell small, circular, slightly granular, with a little nucleus, and developing into a fibre. Our simplest tumours are composed of cells, scarcely, if at all, to be distinguished from the above; and these white fibrous, or desmoid tumours, are the most innocent possible growths, as a general rule. A stray exception may occur, now and then, to prove the rule. We then come to fibroid, fibro-nucleated, recurrent fibroid, fibroplastic, fibrinous tumours, named according to the fancy of writers, who recognise alike their similarity to simple fibrous tumours, and their divergence from them. These are of variable malignancy; they are of as variable minute construction. Not only do their constituent cell-elements differ more or less in form from the primary lymph-cell, but they also differ in power of development. Some remain always as cells, and never develop into fibres; these are the most recurrent. Some make attempts at development, and hence the caudate cell of various form; some appear only as nuclei, without external cell-wall. Again, power of development into fibrous forms is quite different from active reproduction; generally it is not associated in the same cells. The recurrent tumours are masses of rapidly produced cells, or nuclei, with no attempts at the formation of fibre.

"Cancer itself can be brought under the above law. It is no heterologous or parasitic formation. It is simply a monstrously abnormal plastic growth; its cells differ as widely as possible from the healthy type. In acute cases they are rapidly produced, make scarcely an attempt at development, and die off with rapidity; in schirrus they are formed more slowly, and in much smaller numbers, live longer, and make some attempt at caudation, but they are still further removed in form from the typical cell of healthy tissues.

"The more I think over the subject of morbid products, the more I am convinced that, in the above formula, we have the expression of a law

that includes most of their phenomena. It will, slightly modified, apply not only to large classes of tumours, but also to tubercle and to pus. Tubercle is a lymph-cell, of low vitality, incapable of development into healthy fibre, dying after a short existence, and generally becoming a foreign body. Pus may be described in words almost identical—their material difference being one, probably more of chemical constitution than of vital power—for both are possessed of almost a minimum of vitality. Tumours are composed of cells whose vital force is greater than pus or tubercle; and this vital power is rather spent in reproduction than in development, as in the healthy cell. The ordinary plastic cell goes through certain phases, dies, and is removed; its place is taken by a new cell, developed, probably, from the nucleus of its predecessor. The abnormal cell fails to arrive at perfection, often becomes a monstrosity, and has a tendency not only to reproduce itself from its nucleus, but to generate, in neighbouring lymph, organisms similar to itself. Thus the constituent cell of the tumour has a certain independent vitality, similar to that of the entire tumour; or rather the converse is true—the tumour is composed of cells of independent vitality, and hence it possesses the same form of life with the cell. And, as the life of the cell is of a low type, so is that of the tumour. I cannot but think that many of the able minds which have been engaged in studying cancer, in its minute anatomy, have failed to make an adequate impression upon practical surgery, because they have been led away to look on cancer as a thing quite different from any of the ordinary structures of the body, instead of a perverted form of a natural structure. And I am sure that their views, carried out to their legitimate conclusion, would lead us to despair of any remedy for cancer but the knife, or other agents of destruction. Whereas, if we regard the cancer-cell merely as a perverted lymph-cell, we shall never rest until remedies are found which will influence it—*i. e.*, the lymph-cell—to a more healthy type.

"I am sure we neglect too much the auxiliary treatment of good tonics, especially mineral tonics, good air, and abundant food, with proportionate exercise; and we should have slower tumours, and fewer relapses, if we compelled the attention of our patients to these matters."[a]

These various extracts indicate a common direction of thought in their authors, and help to prove the proposition that, the result of pathological studies during the past decade has been the recognition of a common type for forms of disease, which had not been clearly recognised before. The consequences of this recognition must be to simplify much that was obscure or confused. The entire range of inflammations, whether simple, strumous, or rheumatic, together with all tumours, innocent or destructive, are shown to have as their *point de depart* the same cellular element; and

[a] On Cystic Disease. By Maurice H. Collis. Dublin Quarterly Journal, Nov., 1860.

however various the immediate change may be which is thus produced on the typical cells, it is not a little remarkable that the mode of their death is the same, whether they have run their course as lymph, pus, cancer, or tubercle—namely, oily metamorphosis.

The student who would follow out the whole series of fatty degenerations, the result of inflammation, will find a clear and simple statement of them in Mr. Simon's paper on inflammation, in *Holmes's System of Surgery*. Some parts of this essay are so important, as condensations of our present state of knowledge, that I cannot refrain from quoting them:—

"Let the student examine inflamed muscle, as for instance, in the *post mortem* examination of a compound fracture, or of a recently made stump. He will find the structure weakened, so that it easily gives way with pressure or traction; he will see, under the microscope, that the substance tends to fall into irregular fragments; that its natural striation is more or less replaced, first by an almost homogeneous appearance, and afterwards by an appearance of aggregated granules; that, with these granules of albuminous matter, into which the muscle has resolved itself, there is mixed, even from an early date in the inflammation, a noticeable quantity of oil drops; that often these oil drops appear before the disintegration of muscle has made much progress, and then arrange themselves in such mutual relation, tranverse or longitudinal, as to suggest that the sarcous elements have changed themselves, particle by particle, into oil; that, little by little, the oil drops multiply to such an extent as to be the chief visible objects; the limitary membrane of a fasciculus seeming now to be almost filled with finely divided oil, diffused through some scanty connective albuminous material; that the limitary membrane, within which the muscular tissue is thus emulsionized, tends also itself to undergo dissolution, and let its proceeds confuse themselves with the similar debris of neighbouring fasciculi, till more or less bulk of muscle is reduced to a state of oleo-albuminous liquidity, and from this point, if the observer have the opportunity of watching the changes which lead to convalescence, he will see that gradually the liquified material diminishes in volume; that, in proportion as it vanishes, the adjoining parts adapt themselves to the altered relation; that eventually only a scar-like puckering of substance remains to mark the place where muscular material has irrevocably melted away.

"Let him examine inflamed bone—as for instance, in a carious vertebra; he will see that the structure breaks down under his finger, and offers scarcely any resistance to a knife, that the microscopic texture is rarified—cancelli, canals, lacunæ, being all larger than natural, and the solid framework all scantier; that the material is tending to break into its component parts, and to undergo changes, which admit of its being removed by the circulation. In many cases, (for example under the irritant pressure of an aneurisum), he will find that a quantity of bone has

thus gone, leaving no trace behind—gone, of course, only after having first become liquid; and it appears that when bone is inflamed, the first step towards this disintegration consists in a breach of the ordinary union between the mineral and cartilaginous constituents, with a primary removal of the former and a chemical change of the latter. If there be discharge from the inflamed part, there will be found in it bits of bone, chemically and microscopically demonstrable.

"Let him examine inflamed nerve; he will find the medullary cylinder of each nerve-tubule falling, as it were by cross cuts, into irregular pieces, at first large, but as the process advances, getting smaller and rounder and assuming the character of oil, till at last the tube-membrane is filled with oily material which gradually undergoes removal.

"Let him examine the hard texture of an acutely suppurating joint; he will find the strongest ligaments in course of being reduced to an incoherent state—either actually pulpy and half liquified and in course of removal, or ready to break with the least traction; he will find, unless proper splintage have been used to prevent it, that dislocation is occurring from this cause; he will find, if the inflammation have been primarily synovial, that the cartilage is smoothly melting away at its surface, into the fluid which bathes it; or if the disease has begun subarticularly, that the cartilage, where superjacent to carious bone is irregularly eroded and perforated; and throughout, with the microscope, he will find, wherever there are evidences of advancing disintegration, that the softening material is abundantly marked with oil drops."

It would be tedious, in such a retrospect as the present, to go with a great minuteness into the various modes of fatty or oily degeneration which affect all morbid cell elements. The principle is the same in all—namely, that when the life of a cell is over, chemical force takes the place of vital, and the gradual dissolution of the cell commences.

I must pass on now to consider how far these sound principles of pathology, which the last ten years have evoked or confirmed, have already borne fruit in practice, and to eliminate what seems to me of permanent utility from the copious suggestions with which our medical literature abounds.

SYPHILIS AND GONORRHŒA.

Is Andral's dictum true, that syphilis is so systematic, so symmetrical, that it may serve as a key to all pathology? Let the following aphorisms, culled from the works of the last ten years, answer:—

Blennorrhagia and chancre are two affections entirely distinct.—*Ricord*, *Egan*, *Acton*, *Labatt*, &c.

The venereal virus produces two principal results—1, a local inflammation (blennorrhagia); 2, a form of ulceration (chancre).—*Vidal de Cassis*, after *Hunter*, &c.

Blennorrhagia is a local inflammation, *Ricord*, *Vidal*, &c., and never gives rise to constitutional syphilis.—*Ricord*, *Porter*.

The matter of a virulent gonorrhœa may produce abrasions, and be followed by mild cutaneous eruptions.—*Egan*, *Vidal*, *Baumés*, *Requin*.

A non-indurated chancre is always a local disease, and is never accompanied or followed by secondaries; the bubo resulting from such a sore is suppurative.

An indurated chancre is the evidence that the venereal virus has poisoned the system, and has returned to the sore. The gland resulting from it is indurated.—*Ricord*, *Acton*, *Montanier*, *Maisonneuve*, &c.

A mild form of constitutional symptoms may ensue after a simple primary (non-indurated) sore.—*Egan*, *Labatt*, &c., after *Carmichael*.

Every form of primary disease may be followed by constitutional affections, the nature and duration of which no one can predicate.—*Holmes Coote*.

Where phagedæna is the primary affection, secondary symptoms may not arise for ten or fifteen years.—*Ibid*.

The peculiar danger attending indurated chancre arises from its being obstinate and chronic in its course; the longer the primary disease remains, so many more are the chances of constitutional affection from absorption.—*Ibid*.

There is no regular interval between the introduction of the poison and the development of its effects. There is often no attempt at its elimination, either by the formation of a bubo, or by eruption, or by fever; there is nothing periodic or critical in the character of the disease; it never wears itself out; it never recovers or subsides spontaneously; and though the virulence of the disease may abate and the symptoms disappear, it leaves the patient as deeply poisoned himself, and as capable of conveying the virus to others, as he was before. Finally, one or any number of attacks of lues, will not protect him from future contamination.—*Porter*.

It appears to me that the poison, in general, wears itself out, except in the very severe cases.—*Holmes Coote*.

Elimination of the poison by the skin is the natural method of cure.—*Weedon Cooke*.

A man who has once had an indurated chancre can never have a second. Inoculation from any source in such a man will only produce non-indurated sores.—*Ricord*.

Syphilization is a state of the organism in which it will no longer evolve the syphilitic virus, in consequence of a state of saturation.—*Auzias de Turenne*.

Syphilization is undoubtedly useful against syphilis; it is the only certain remedy that we know, and it is not pernicious to the organism; mercury, therefore, ought to be banished as a curative remedy.

Syphilization is not so certainly useful against mercurialized syphilis,

but it ought always to be tried; it often does cure it entirely, and it at least does not fail to do some good in the greatest number of cases.—*Boeck.*

I believe *mercury* to be a specific for syphilis.—*Porter.*

It is a doubtful question whether mercury is a remedy at all for syphilis. In my opinion it would be wrong to give a hundredth part of a grain of mercury to a syphilitic person who had not been before mercurialized.—*Boeck.*

Of 300 cases of secondary syphilis, who were treated by syphilization, 290 were cured.—*Ibid.*

The true explanation of cures by syphilization is the abstinence from mercurial treatment, and the eliminating power of nature.—*Weedon Cooke.*

A chancre is the only source of syphilis.—*Ricord.*

The semen of a diseased man may infect the woman with whom he may have connexion, even though she never become pregnant.—*Porter.*

Pus from a primary affection is the only contagious element in the disease. It may be secreted by the skin, by a lymphatic vessel or gland, and the ulcer which supplies it may be simple, indurated, or phagedænic. No secondary or tertiary affection is capable of being communicated by contagion.—*Ricord.*

That mucous tubercles may be transmitted is generally acknowledged. *Vidal.* But mucous tubercles are *often* a primary affection.—*Ricord.*

The blood of a patient with secondary syphilis has produced tubercular and pustular eruptions, when introduced into the system of a healthy patient by inoculation.—*Waller of Prague.*

I have great reason to believe that in many of the cases, where a nurse is said to have contracted syphilis from suckling a syphilitic child, the disease has been merely *thrush.* This appears to me partly to have been a source of error in Ireland!—*Acton.*

A woman who has never had a chancre, but who has constitutional syphilis, may bear a pocky child, who may infect the nurse.—*Porter, Diday, Vidal, Waller,* &c.

A child may be affected *in utero*, but once born, only by direct contagion; at least poisoning through the milk of a syphilitic nurse is not proven. Equally unproved is the contamination of the nurse by a child which has not primary sores.—*Ricord.*

Many more opposing aphorisms might be accumulated, if necessary, for my purpose. This is to point out how impossible it is to dogmatize on the subject of syphilis in the present advanced state of pathological knowledge, without meeting with an opposing truth, no matter in what direction our prejudices or imperfect observations may lead us.

Varieties of Primary Syphilitic Sores.—The opinions of Ricord, Porter, Lee, Weedon Cooke, and many others, all tend to recognise the individual

as the modifying agent of the poison; and such must manifestly be the truth. Dissecting wounds affect the system or not, according to the state of health of the individual, and syphilis has much in common with them. The sanguineous man will develop an active inflammation, with a tendency to soft chancre and suppurating bubo; the man of languid circulation, on the other hand, has a tendency to chronic induration, both local and glandular. The whiskey drinker is notoriously subject to phagedæna, whether ulcerative or gangrenous. Each, according to his natural temperament, or temporary condition, has power to modify a poison which, of itself, has been modified by the source from which it was derived.

It is manifest that contagious disorders acquire virulence of action by concentration and rapidity of circulation. An epidemic is modified by a hundred circumstances; and syphilis, as any other contagion, is equally subject to continual alterations. It is no mathematical quantity of unvariable value, but an ever fluctuating power which it requires much calculation to determine. Like all other diseases, it is not an entity but a condition, and the minds of men should no longer be diverted from the due recognition of this fact, by the circumstances of the system coming under its influence through the operation of a virus.

Its modes of action are reduced by Lee to four, namely,—Adhesive, Suppurative, Ulcerative inflammation, and Mortification, the first only being followed by constitutional symptoms, and requiring mercury. His views are given at length in *Holme's System of Surgery*, to which we must refer our readers.

Of Improvements in Treatment.—The principal is the reintroduction of mercurial fumigation, long since recommended by the late Mr. Colles, whose cinnabar candle was well known to us as students. Mr. Langston Parker[a] has been the steady supporter of this plan of treatment for upwards of twenty years. It is now in very general use in London; combined with the vapour bath, it is an admirable mode of bringing the system under the influence of the medicine. Syme holds that the mineral should be used only as an alterative and absorbent, in which view he is followed by most people, only that some hold that it may be pushed until it touches the gums without interfering with this mode of action.

For my own part, I would use it for syphilis as for any other complaint, regulating the amount and frequency of the dose according to the circumstances of each case, and, as Mr. Porter used to say, according to the apparent strength of the patient.

Inoculation.—On the subject of treatment by inoculation, many of the contradictory statements and many fallacies are got rid of, if Mr. Porter's

[a] Reviewed in our August Number.

law be anything like universally true—that the poison will not return on itself. As a means of cure, inoculation is acknowledged to be uncertain, even by Boeck, whose statements go no further than to show that after its use the disease ceased to manifest itself externally. Here we should have the test of power to propagate healthy children, before we could admit that a cure was proved. Syphilization, as a means of cure may, however, be allowed to die a natural death; and as a means of diagnosis, Mr. Porter's law shows it to be of no practical value, for in doubtful cases no one would try the question by syphilizing what Ricord calls a virgin subject. No doubt, laws are not absolute, being, after all, only the expression of the experience of one or more men on certain points, but they are of great negative value.

In the physiological history of inoculation, Ricord has developed many points of practical interest, such as that the period of incubation is in proportion to the depth to which the poison penetrates, and that for the production of a chancre, an abrasion is necessary. This is, however, denied by Labatt. Ricord also points out that chancres only poison while p ogressing as chancres, or at least when not healing. We must caution the readers of his letters against confounding his *ulcus elevatum* with our elevated ulcer; the former being an ulcer with raised edges, the latter with elevated fungating surface.

For Tertiaries, an addition to our treatment is given by Gamberini, of Bologna, in the form of iodide of sodium, the advantages of which are stated to be, that it is better borne by the stomach, and has a more agreeable taste; that it has for its basis a salt which is a normal constituent of the body, to a large extent, and that it produces less iodism. We can here only refer to the interesting remarks of the same author, on the truces of syphilis, in the 17th volume of this Journal.

Gonorrhœa.—The treatment of this affection has varied little in the past decade. The local nature which is all but universally ascribed to it, has led more men to treat it by simple local astringents. It gradually passes back along the urethra, and if it can be cut short before it reaches the sinus pocularis, epididymitis will not come on. Dr. T. Chambers[a] believes even that it will get well spontaneously, from two to three weeks, if let alone. It may be observed, that in all inflammations, local remedies must be applied weak and often while the action is acute; strong and seldom when it is chronic. This should be followed out in gonorrhœa: two grain solutions of alum to be used every half hour in acute cases, and in chronic, a drachm or two to the eight ounces—used twice or three times a day. In the intermediate stages, intermediate strength and frequency of injections, in an inverse ratio, should be adopted.

[a] Lancet, June, 1861.

So in *gonorrhœal ophthalmia*, a half grain solution of nitrate of silver applied every half hour will almost invariably cut short the disease in 24 hours. Carefully carried out it will scarcely ever fail.

The following law is capable of wide application, both in inflammations, internal and external, and for the exhibition of many medicines. *The more acute the diseased action, the weaker and the more frequently applied should our remedy be; the more chronic the action, the stronger and less frequently applied.* In recommending injections as sufficient to cure gonorrhœa, it is not intended to exclude the use of such general treatment as may seem necessary, such as purgatives, antispasmodics, tonics, &c., but the use of the nauseous and disgusting cubebs, copaiva, or terebinthinates, may be altogether dispensed with.

Mr. Weedon Cooke, Mr. Borlase Childs, and Mr. Warner[a] corroborate the value of injections above all other treatment. Their favourite astringents are the chloride of zinc, perchloride of iron, and solution of the pernitrate of mercury; more especially the last, at the strength of half a minim to the ounce of water. Cures are said to have been effected by the last after six injections, and the disease seldom exceeds 10 days in duration.

MM. Caby and Moulson[b] speak highly of bismuth as an injection. The bismuth to be well washed; and 20 parts are to be mixed with 200 of distilled water.

In *gleet*, Adams recommends the use of five grain doses of Chian turpentine, its action being upon the follicles and ducts of the prostate. Muriate tincture of iron and tincture of opium will often render the discharge in such cases somewhat purulent, when injections will effect a cure.

DISEASES OF BONES AND JOINTS.

What is new and proven on this subject is well condensed in Mr. Barwell's book.[c] The views of Virchow on the nature of inflammation, as a hypersecretion in the first instance, are supported.

Synovitis is shown to be from the first accompanied by increased moisture. Dr. Fuller, following Todd, attributed the rheumatic tendencies of fibrous tissues to a peculiar attraction which he supposes them to possess for lactic or lithic acid; but seeing that the decomposition of these very tissues will produce lactic acid, it is more reasonable to attribute the presence of the acid in the blood and in the tissues to such decomposition, and not the decomposition to the presence of the acid; such is Barwell's view.

Cartilage.—Brodie's ancient theory, that the cartilages are the seat of active vascular inflammation, has gradually been subverted; first by

[a] Lancet, Oct. 12, 1861.
[b] Medical Times and Gazette, June, 1861.
[c] Barwell on Diseases of Joints.

Aston Key, then by Richet, Ecker, Goodsir, Redfern, Birkett, and Bryant. The reaction of opinion, as usual, was excessive, and all changes in cartilage were ascribed to atrophy, in consequence of the proved absence of all vessels in its structure. The proliferation of cartilage cells from inflammation, laid down by Virchow, is claimed as a discovery by Barwell; probably both arrived at the same conclusion by independent reasoning. He shows, with Virchow, that ulceration of cartilage depends upon fatty degeneration, and that true inflammation of cartilage consists in a hypersecretion of the cells; he denies that the latter occurs as a primary affection; it is for him always a result of synovitis or osteitis, but it is no less an active process, partaking of the nature of inflammation in other structures, in that it is characterized by increased activity of production.

Osteitis.—Mr. Erichsen has done good service by drawing attention to the fact, that in disease of the tarsus the bones are primarily affected, the joints remaining free until a later period. Osteitis, and not synovitis, is to be combated: hence, as he advises, excision of the individual bone or bones should be done. I have found free incision into the body of the bone equally useful in some cases; these bones are peculiarly liable to congestion, which runs on, if unchecked, into suppuration and caries; they rarely become necrosed, and a free and timely opening may cut short the process of destruction. Mr. Barwell has pointed out a similar fact as regards the articular ends of long bones in children, which accounts for the readiness with which joint inflammations light up in early life. The growth of the bone takes place mainly, as is well known, at the epiphysary junction: hence, there is a permanent and normal hyperæmic condition of the bones at this point as long as active growth is advancing, and it needs but some trifling cause to increase hyperæmia to congestion, and when congestion takes place, either active inflammation may quickly come on, or a low state of nutrition be induced, which will run into strumous osteitis, and the whole train of chronic disorganization of the joint. Klose[a] and Chassaignac[b] describe as something new that formidable inflammation of the shaft and ends of the large bones which we have long known in this country as complete acute necrosis, where the entire thickness of the bone perishes suddenly from inflammation, frequently destroying the life of the patient, as well as his limb. Klose had seen the disease in the young in whom it is more common, for the reason already given; Chassaignac had seen it in older patients; Gosselin points out their identity, and names it acute suppurative epiphysary osteitis. Instances of the disease have fallen under my own notice in the shoulder and in the knee, destroying the limb, and ultimately the life in the latter

[a] Prager, Vierteljahrschrift, Jan., 1860. Epiphysentrennung *or* Meningo-Osteo-Phlebitis.

[b] Monograph sut L'Osteo-myelitis.

case, and only stayed in the former by very free incisions down to and along the bone; on a small scale we see it in paronychia osseosa of the nail-phalanx, or bone-felon as it is termed by the Americans.

Morbus coxæ.—Rust, of Vienna, asserts that osteitis is the invariable starting point of hip disease. No doubt this is true of chronic morbus coxæ, whether strumous or rheumatic, but the acute disease is clearly synovitis; the great width, depth, and fulness of the gluteal region, the swelling and tenderness in the groin, and behind the trochanter, the marked increase of heat, great pain on motion, and, above all, the very rapid destruction of the joint, all prove that the synovial membrane and softer tissues are primarily engaged.

Mr. Smyly has drawn attention to the fixity of the joint in the early stage of chronic disease, as evidenced by rotation of the entire pelvis taking place on the sound joint when the affected limb is grasped and rotated; as a means of diagnosis, in doubtful cases, this manœuvre is positively invaluable.

The rarity of dislocation on the dorsum of the ilium is recognised by all writers, upon the subject of hip disease, in the last decade—the symptoms supposed to be characteristic of it being attributable to absorption of the head and neck of the os femoris, and to expansion of the acetabulum. Tessier,[a] of Lyons, asserts that prolonged immobility of a joint may not only aggravate existing disease, but produce various lesions in a joint previously healthy, so that five or six months' perfect rest sufficed to destroy the synovial membrane and cartilages. Hilton[b] in delivering his admirable lectures on pain, gave a striking contradiction to this statement, by exhibiting the cramped and unused foot of a Chinese lady, in which the articular surfaces had remained uninjured under the strongest possible pressure and the most absolute immobility.

Treatment.—A combination of nitrate of potash and antimony is recommended for acute synovitis in strumous patients, in place of mercury, by Barwell. In the use of leeches lowering the patient should be guarded against, for unquestionably suppuration follows their use when pushed too far. In fact, in any case of acute inflammation such a result may occur, and if it be wished to favour the formation of matter, it can often be done by grouping a few leeches over the spot where this result would be advisable.

In addition to the chlorides for purulent infection and deposits in joints, the hyposulphites have been vaunted. Paoli recommends the sulphites either injected into the veins or internally administered in cases of this kind, and in all diseases arising from an animal ferment—but this has yet to be tested.

[a] Coulson in Lancet, April, 1854, and Braithwaite, Vol. 30.

[b] Published in Lancet, November, 1861.

The advantages of free incision into joints which are full of pus and shreds of cartilage, were laid down, just ten years ago, by Mr. Gay,[a] he showed the inadequacy of sinuses for free discharge of these products of destruction, and pointed out the reparative power of joints when freed from their presence. In this he was seconded by Adams of London, Brodie, and now by Barwell. Subcutaneous section in hydrarthrosis, practised by Goyrand, seems to have met few followers; nor have Velpeau and Bonnet's injections of iodine. Some good cases of the latter are given by Dr. M'Donnell of Montreal,[b] but we have not found reason to use it in Dublin; as firm pressure, with cold or stimulating lotions, generally reduces the swelling to reasonable dimensions, and Scott's stimulating strapping does the rest.

For chronic synovitis, as well as for the more medical ailments of rheumatic gout, the Turkish bath is of essential service, as are also the various modifications of hot air and vapour baths.

As remedies for the pain in strumous joints, Jobert de Lamballe recommends an ointment of from one to three drachms of nitrate of silver to the ounce of lard. This acts as tartar emetic ointment does, by producing an ecthymatous eruption. Veratrine ointment is recommended by Klinger.[c] The actual cautery is highly praised by Syme, and recommended with all the persistence and energy of that able surgeon. Barwell speaks disappointedly of it. The danger is, undoubtedly, lest it should become an irritant instead of a counter-irritant. Lebert speaks highly of the douche, in the later stages of cure, as a stimulant to absorption of plastic deposits. Coulson advises it for hyperæmic and congested condition of the epiphyses.

Solly places the greatest confidence in repeated issues in strumous joints, and states that he has almost invariably succeeded in obtaining either anchylosis or a useful joint by patient perseverance; as a proof of which, he has been called on to amputate for white swelling but twice during his long career as a surgeon.

Chronic Rheumatic Arthritis.—The writings of Robert Adams and R. W. Smith on chronic rheumatic arthritis have been so long before the profession, and are so well known, and highly appreciated, that we have not thought it necessary to refer to them on the present occasion. The splendid monograph of the former surgeon has exhausted the subject.

EXCISIONS OF JOINTS.

"Removal of a joint may be called for to save life in the height of an acute disease, to cut short the wearing process of a chronic and incurable

[a] Paper read before the Medical Society of London—Med. T. & G.. Vol. 24.
[b] Montreal Medical Circular, 1857.
[c] Dublin Hospital Gazette, February, 1854.

disease; to rid the patient of a deformity and encumbrance."[a] In deciding on operation, and *mutatis mutandis*, in making the choice between excision and amputation, "the most essential questions are:—Is the patient's constitution capable of ultimately conquering or healing the disease? If so, will the limb be of value or an encumbrance? In his worldly circumstances is it possible for him to await a long, and, perhaps, a doubtful process of cure?"

Now, in the first place, as regards acute destruction of joints, as a rule free incisions will save us the necessity of either excision or amputation. Where they will not do so it is because the cases run into the category of chronic disease.

As regards chronic disease, the rule will be different for the child and for the adult. Children have great powers of recovery, both local and constitutional. Many a condemned limb has and can be saved by patience. If operation be clearly necessary, it must be remembered that after either excision or amputation in the child, the remains of the limb are dwarfed and withered as compared with the sound limb. This point is set at rest by Pemberton[b] and Syme[c] as regards excision. A writer in the *Lancet*[d] states that it is equally true as regards amputation, and Mr. Humphry's paper in the *Medico Chirurgical Transactions* for 1861, explains the reason. He finds that the growth of a long bone takes place at its epiphysial lines, generally, with unequal energy; and that the growth is greater at the end where the epiphysis is last to unite, which is generally the larger end. He finds, also, that the growth of a stump is not usually proportionate to the rest of the body, and is least so, when the more quickly growing end of the bone has been removed.

Yet we cannot accept as sufficiently conclusive the statements of Messrs. Humphry, Price, and Butcher, that, by confining our resection to a portion of the epiphysis, we shall not interfere with the growth of the limb. For Mr. Syme's experience disproves the statement.

Again, it is impossible to know beforehand how much bone may have to be removed. When a thin slice is cut off, another and another may be found necessary, until it is cut far beyond the epiphysial junction.

If the statistics we have be full and honest, their result is, that, as regards life, excision is, for all joints, a more favourable operation than amputation; but it is greatly to be feared that many of the unfavourable cases have not seemed to those who have had them to present sufficient points of interest for publication. For diseases of the ankle, elbow, and shoulder, excision is now confessedly to be preferred to amputation. As to the wrist, knee, and hip, the fullest attainable information is necessary

[a] Barwell, op. cit.
[b] Br. Med. Jour., 1859.
[c] Pr. of Surgery.
[d] Jan. 14, 1854.

for the formation of any decided opinion. Heyfelder,[a] in his admirable and laborious work on resections, gives very full statistical tables on the subject, up to the latest date.

Wrist.—The results here are as follows:—Total resection of radius, ulna, and carpal bones, 14 known cases, 1 death, 9 successful results, 3 partially so; of partial resections, 35 known cases, 8 deaths, 26 successful results. The cases of this excision are so few that it is not advisable to make a separate table of those operated on in the past decade. It may, however, be remarked that most of the total resections come within that period.

As regards excision of the wrist joint for caries, there is a tendency to relapse and ultimate failure, which, from the nature of the case, is unavoidable. Both the number of the small joints and the multitude of tendinous sheaths, which must necessarily be opened, predispose to burrowing suppuration. The tendons and their sheaths may be avoided by making the incisions longitudinal, but the operation, in such case, will be troublesome and tedious, and if the disease is extensive, these incisions will not suffice. When such operators as Fergusson, Simon, &c., have to put on record repeated and unsuccessful operations, and when, to come nearer home, Mr. Butcher, who has so distinguished himself as the champion of excision, is obliged to be satisfied with fingers permanently flexed, as the best result of his well-planned operations, it can only be concluded that the operation is of exceptional application, and of more than doubtful result. Where it is not possible to execute it by longitudinal incisions, Mr. Butcher's modification of the transverse incision, by which the muscles of the thumb and their tendons are spared, is of great value, as assisting in retaining a useful amount of motion in the thumb.

Knee.—Of total resections of the knee, 183 cases are collected by Heyfelder, from Filkin's first case, in 1762, to the end of 1859. In the last ten years there have been 146 known cases, 37 deaths, 17 secondary amputations (of which number all but one recovered).

The results as regards use of the limb are—

1 with limb bowed at the knee.

1 fibrous union only.

4 condition unknown.

10 still under treatment, progressing favourably.

76 result given as good in various degree.

Pyæmia and tuberculosis were the chief causes of death.

The results, then, are 1 death in 4, or 25 per cent.

From these numbers let us now deduct all who were operated on under the age of 15.

There were 38 such cases, the particulars of which were more or less known.

[a] Operationslehre und Statistik der Resectionen. Von Dr. Oskar Heyfelder. Vienna, 1861. Reviewed in the last number of the Journal.

Five of these died, and four were subjected to amputation. In one instance an infant of two years of age was subjected to this operation! it died.

Comparing the statistics of the operation during the past ten years with those of the previous period, from 1762 to 1851, there appears a decrease of 50 per cent. in the rate of mortality. One-half of those operated on died in the early period. Jones' operation in 1851 marks a new era. Heyfelder's tables are not absolutely complete, but they are the best available at present, and probably give as true an account as can be expected from statistics.

There are a few cases of partial resection of the knee joint, but they present no material feature. As regards the mode of operation, Mr. Butcher's papers on the subject in this Journal, leave little to be added. He prefers the H incision, and now recommends the removal of the patella. Hutchinson suggests to divide the ham-string muscles, in order to check the forward tendency of the femur. Few cases will require this, as, by attention to Mr. Butcher's suggestions, especially the adaptation of an anterior splint, this source of annoyance will be obviated. Another suggestion of Mr. Hutchinson's may deserve more consideration, namely, the making of a button-hole opening in the ham, in order to prevent lodgment of pus in the deeper parts of the wound. This gravitation of matter is a fertile source of disappointment—infiltration of the areolar tissue and diffused abscess, with destruction of the periosteum and extension of the osteitis—consequences which such an opening might help to prevent.

As to the selection of cases for excision, where operation is indicated, it has already been said that free incisions are the rule for acute suppurative destruction of the joints. Coulson denies the frequency of strumous disease of joints; if this be true, much more may be done by patience on all hands to avoid operation than has hitherto been effected, especially in children. No joint should be excised when there is reason to suspect purulent infiltration of the cancellated tissue of the bone to any extent. These cases are characterized by tenderness along the bone, by the ramification of blue veins over the joint, by a transparency and glossiness of the skin in the same situation; by gnawing pains, and a sensation sometimes as if the bone would break; by great want of power to use or bear upon the limb, and by a comparative absence or rarity of sinuses. Such cases are much better suited for amputation than excision, and unfortunately they are of frequent occurrence.

The model case for excision is the white swelling, which will not anchylose, or which, from receiving a hurt, is running on to a suppurative condition and threatening the life of the patient. There is a condition more frequently found in the wrist and elbow than in the larger joints, viz., where the disease is limited by a cup of plastic material, that

becomes ossified and imparts a sensation of increased thickness and hardness, without tenderness; this condition, in the vast majority of cases, will surely get well by anchylosis, partial or complete; but occasionally the patient's strength threatens to give way, and excision may be called for; it is a rare case, but the most promising for the operation. Few museums are without old specimens of bones amputated for such a condition of things.

To sum up in the words of Mr. Barwell—words which, though bearing evidence of very hasty composition, inculcate sound practice,—"The operation must be considered as still *sub judice*. It has zealous advocacy, and bitter antagonism. At the present time the balance of evidence seems rather in its favour, but we have not all the evidence. It cannot be said either that preference should be given to excision or to amputation; but, it may be observed, that the choice of cases for excision of the knee, should be very carefully made, and that it is not an operation which can be practised in an equal number of diseases of that joint, as resection of the elbow or shoulder, in maladies of those articulations."

Hip joint and head of femur.— As regards excision of the hip joint and resection of the head of the femur, the most complete statistics are to be obtained by a comparison of Heyfelder the younger's monograph, and a paper by Fock, in *Langenbeck's Archives*. By collating their tables for the years 1851—60, inclusive, the following results are arrived at.

Seven cases were operated on for gunshot wounds, of which but one recovered;[a] but seeing that amputation for gunshot wounds of the hip joint may be said to be invariably fatal (but one exception is on record), and that all patients who are not subjected to operation also die, this ratio of success is sufficient to justify the adoption of excision in such cases.

Omitting cases of which we have no recorded result as to the life of the patient, it appears that in 68 instances excision of the hip joint has been performed for disease, during the decade. Twenty-seven of these patients died in periods varying from a few hours to 18 months after operation; one died of phthisis after three years. Of the remaining 40, 26 have limbs of varying degrees of usefulness, five are still on crutches, two are still unhealed, and of seven, the result, as regards the limb, is not known.

These results are not cheering, but they are quite sufficient to induce us to operate, if death seems otherwise certain, and that the circumstances of the case hold out any prospect of success. Resection of the head of the femur stands on a different footing from other resections in the extremities, inasmuch as we have no practical choice between it and amputation. The latter is not applicable for disease of this joint, and has been

[a] This case was operated on by Surgeon O'Leary in the Crimea; Staff Assistant-Surgeon F. O'Dell, who was present and assisted at the operation, states that this man subsequently had a very useful limb.

invariably fatal when attempted. Indeed no modern surgeon is likely to risk his reputation by repeating the operation: hence, we are justified in resorting to resection, if we have any reasonable probability of success. Mr. Hancock[a] has shown that the more formidable operation of excision of the entire joint, is capable of a favourable issue, at least for a time. In three of the successful cases given in the tables of Fock and Heyfelder, perforation of the acetabulum and intra-pelvic abscess are mentioned as complications.

Ankle.—Excision of the ankle joint is satisfactory in its results. In the hands of Mr. Hancock, the deaths have been not greater than one in four, and the limbs have been very useful, even in patients who have to earn their bread. In Heyfelder's tables but two deaths are noted in 22 cases, and two secondary amputations; nearly all the cases are reported as useful joints with motion, but two being anchylosed. Excision of the os calcis and of the astragalus may also be looked upon as proved and found useful in suitable cases. Nature supplies a large amount of firm fibrous tissue in the room of these cancellated bones, and in the case of the os calcis, a high heel of cork or wire-spring supplies any remaining deficiency. In our present number we have an interesting account of two new cases of resection of the astragalus by Dr. Heyfelder.

Scapula.—Complete resection of the scapula has been done four times, by Langenbeck, Syme, Heyfelder, sen., and Jones. The cases of the first three died, the other convalesced; of partial amputations, to any extent, seven out of 15 died.

Maxillary bones.—Heyfelder, sen., has four times removed both superior maxillary bones. Three of these are detailed in our 23rd volume, the fourth in his son's monograph.

The first, a case of cancer, survived the operation 15 months, dying of a return of the disease.

The second, a similar case, died in rather less than two years after the operation, of a return of the cancer.

The third had survived 14 months without any sign of return of disease at the last account. This operation was done for what we should call a lupoid ulceration, but there is no proper description of the nature of the morbid mass.

The fourth case died 40 hours after the operation, having disease of lungs, liver, and kidneys. Other operators have performed the formidable feat of removing these bones,—Dieffenbach, Maisonneuve, twice, Dietz, Jüngken, and Langenbeck.

Four cases out of 10 may be considered successful; in one the result is not known.

Direct Injury.—Excision is of great value in cases of direct injury. It

[a] Lancet, 1857–8.

is well known that the rate of death, after amputation, is high in such cases, and especially in gunshot wounds; the results of the Crimean campaign are generally in favour of the attempt to save the limb by excision of the shattered joint where practicable; the mortality is high, but not higher than that of amputation. Guthrie long since laid down the rule—in gunshot wounds of the head of the humerus and of the elbow joint—to save the limb by excision, even if a large piece of the shaft has to be removed in the former case; and this is perfectly in accordance with the results of more recent experience. An excellent example of the application of this operation in a case of compound fracture of the elbow joint, lately occurred in the practice of Mr. G. H. Porter; the limb was not only preserved, but was eminently useful for the purposes of the man's trade as a painter.[a]

Anchylosed Joints.—The question of forced rupture of anchylosis, raised by Stromeyer, Louvrier, Dieffenbach, and Langenbeck, is considered by Holmes Coote,[b] Barwell,[c] Brodhurst,[d] Tamplin,[e] Hingston,[f] Frank,[g] and others.

It will be remembered that Stromeyer advocated gradual extension, or flexion, after subcutaneous tenotomy, that Louvrier and Dieffenbach forcibly and suddenly ruptured the anchylosis, and that Langenbeck followed in their steps, discarding, perhaps, the extreme violence which led to rupture of vessels and nerves, and to fatal injury to limb and life in the hands of Louvrier. Langenbeck uses considerable force, under chloroform, but does not insist on completely restoring the mobility of the joint at the first séance. The result of his practice, according to Mr. Frank of Manchester, has been so eminently successful, that, out of 150 cases, he has only lost one, and that by what he terms central necrosis, extending through the epiphysis, and communicating with the joint.

Mr. Brodhurst seems to break up the adhesion by a succession of slight jerks—a plan admirably adapted for getting rid of fibrous bands of small size, which not unfrequently form the sole obstacle to moderate use of the joint. He replaces the limb in its position of anchylosis for a few days, until inflammatory reaction subsides.

Mr. Barwell urges the propriety of early passive motion during the process of cure, so as to prevent fixity.

The subcutaneous section of tendon and muscle, even to a considerable extent, is advocated by the same writer.

[a] Dublin Quarterly Journal, Vol. xxx.
[b] British Medical Journal, September, 1858.
[c] Op. Cit.
[d] Medico-Chirurgical Transactions, Vol. xl.
[e] On Deformities, Medical Times and Gazette, 1858.
[f] Glasgow Medical Journal, July, 1853.
[g] Medical Times and Gazette, August and November, 1853.

AMPUTATIONS.

Mode of Operating.—On the subject of amputations, we have a principle laid down by Mr. Lane, in the new edition of *Cooper's Surgical Dictionary*, which is to guide us in the selection of the flap or the circular method. Slightly modified it stands thus. When amputation is required for accident in a limb not gorged by inflammatory exudations, the circular method is to be preferred; but when the plastic effusions of recent or chronic inflammations have glued the skin and muscles into a firm and unretracting mass, the double flap will be found both easier of execution and more satisfactory in its results. Of Teale's rectangular flap we have, as yet, too limited experience; it would appear to be best suited, in cases of the former class, where lacerations from machinery or other causes interfere with the circular method.

Amputations through the Condyles.—These begin to be looked upon with disfavour, notwithstanding the approval of them by Syme and Ferguson. The cancellated osseous tissue abounds so with veins, that phlebitis of a dangerous character too frequently results from it. Probably amputations at the joints, or in the contiguity, as the French term it, will succeed them, and deservedly so, in suitable cases. The cases which demand amputation at the joint are, however, but rare, and will be limited, as a rule, to the upper classes, as the stumps obtained from amputation in the continuity are much more serviceable to those who have to earn their bread.

Section through the Joint—Has been recommended by Haynes Walton,[a] and he gives a judicious warning against meddling needlessly with the articular cartilages.

In the amputation above the carpus, such removal is bad surgery, as it is followed by loss of pronation and supination in the stump, and great injury to the utility of an artificial member. The presence of the cartilages does not interfere with rapidity of union; for they are cast off in shreds during the suppurative process, and, even in large joints they will disappear in a very few days.

Dr. Markoe[b] of New York supplies us with statistics on this operation. The proportion of deaths, according to him, is 37 per cent. for amputation at the knee joint, and 43½ for amputation in the thigh. The value of such statistics *en masse* is more than doubtful. There are many things to be taken into consideration in the individual case, that can only have light thrown on them by similar circumstances in other cases, and besides, the statistics of one man differ materially from those of another.

Mr. Bryant has given a most painstaking table in the *Lancet* of March 12, 1859, containing much valuable information on the subject of the causes of death after amputation.

[a] Lancet, November, 1859.

[b] New York Journal of Medicine, 1856.

Amputation in the Child is contra-indicated below the knee, for reasons of *convenance*. In such cases the limb ceases to grow at the same rate as the other, and the patient, when grown up, presents the disagreeable spectacle of having his two knees on different levels.

Amputation of the Ankle.—Pirogoff's modification of Syme's amputation at the ankle joint is a valuable addition to our resources; and to Pirrie or Eben Watson[a] we are further indebted for an improvement in the mode of its execution. This modification consists in first directly dividing the soft parts down to the bone, by an incision from the tip of one malleolus to the other, under the heel; secondly, sawing the os calcis in an upward and backward direction; thirdly, completing the posterior flap; fourthly, making an incision in front of the joint, from one malleolus to the other; and finally, sawing off the malleoli. If the os calcis should prove at all carious its remains can be removed on the moment, as converting the operation into an improved and rapidly executed Syme's; but where the bone is sound it has been found to unite to the tibia with wonderful rapidity. In this operation, as elsewhere, caution in selection of cases is required.

All new operations have first to run the gauntlet of injudicious support, and afterwards of almost equally injudicious neglect. This oscillation of professional favour will be in proportion to their importance and magnitude. In the case under consideration it is stated that Pirogoff himself has abandoned the operation; its success in the hands of others demands, a reconsideration of this verdict. Mr. Syme gives it a determined opposition:—

"The only other alteration worthy of notice is that of Professor Pirogoff, of St. Petersburgh, who proposed to retain the tuberosity of the os calcis by sawing it off before the disarticulation was completed, and thus, so far as possible, depriving the operation of all its advantages; in the first place, by rendering it complicated instead of extremely simple; secondly, by making the stump too long; thirdly, by impairing its constitution; fourthly, by retaining a portion of the osseous tissue justly liable to the suspicion of relapse; and fifthly, by not being applicable to all cases requiring amputation at the ankle. On these grounds I have been accustomed to regard the adoption of this modification as a certain sign of lax surgical principle."[b]

It would have been more satisfactory had the energetic Professor of the Northern Athens supplied us with some of his reasons for coming to the above five conclusions.

HERNIA.

Few subjects give greater proof of the desire of surgeons to improve their art, than hernia. These efforts take three distinct directions—

[a] Lancet, June, 1859. Pirrie's Surgery.

[b] Observations in Clinical Surgery, p. 47. Reviewed in our present Number.

1. The radical cure of hernia.
2. The reduction of hernia.
3. Improvements in the mode of operation for strangulated hernia.

Operations for the radical cure.—Wütz er's operation for the cure of reducible inguinal hernia dates back to 1838, but was scarcely known, and not practised in this country until introduced to our notice by Mr. Spencer Wells.[a] It appears to be extremely successful in the hands of the Bonn professor, of Sigmund of Vienna, and of Rothmund of Munich. The last-named had operated on over 1,000 cases up to the year 1858, without a single death. This speaks strongly for the safety of the operation—of its efficiency, accounts are dubious, at least cases are not sufficiently long under observation, except occasionally, for us to judge of the permanency of success. Mr. Wells' paper in this Journal[b] is so ample, that we need only give the briefest description of the operation, which, indeed, is now well known. The instrument consists of a central plug, with two side pieces, which are capable of being detached, in order to change them for larger or smaller pieces, according to the size of the ring; through the long diameter of this plug (which is a flattened cylinder), one, two, or three curved needles can be passed, which make their exit near the extremity on its upper surface; this plug is thrust up into the ring, invaginating some of the integument of the scrotum, the needles are then inserted through the doubled skin and the sac, an external slightly concave plate is now screwed down, so as to compress the abdominal wall and invaginated skin and sac together, with any degree of force that may seem safe or advisable. The apparatus is left in situ from six to ten days, and then cautiously removed; the patient remains horizontal until the needle punctures are healed, and wears a weak truss with a large soft pad, for three months, in order to support the recent adhesions, and prevent the retraction of the invaginated skin. Mr. Wells claims that in strong patients, up to 40 or 45 years of age, when the hernia is of moderate size, a perfect cure may be expected, and that in large herniæ, which a truss will not keep up, such reduction in the size of the ring is obtained as to enable a truss to act efficiently. In our present number there is an ingenious modification of Wütz er's instrument by Redfern Davies; he found that the gut was apt to slip down behind the plug of skin, owing to an aperture of small size remaining unclosed in the upper part of the canal. To obviate this, he makes his cylindrical plug in two portions, connected at their outer extremities by a hinge, and capable of being separated at their point by a screw and lever. Where Wütz er's operation is adopted, this modification of his instrument deserves attention.

Wood's operation has almost supplanted Wütz er's. It has the advan-

[a] Medico-Chirurgical Transactions, 1854.
[b] Dublin Quarterly Journal, 1858.

tage of not stretching the canal and ring as Wütz er's instrument must do. It is a modification of the old royal stitch; its principle is to pass one end of the thread into the canal and out through the skin under one pillar of the outer ring; the other end of the thread is passed up in like manner under the inner pillar, and out through the same opening in the skin. Previous to passing the threads, a dissection of a portion of the superficial fascia and fascia propria has been made through a small opening in the upper part of the scrotum, and as much of these as possible is invaginated when the loop of the thread is drawn up. The ends of the thread are either tied over a piece of round box wood, or simply drawn tight without any intervening material.

Roubaix devised an autoplastic operation, by means of which a triangular piece of skin was made to close the opening of the sac.[a]

R. Davies has applied his modification of Wütz er's operation to femoral and ventral hernia with success.

Lee has used a simple stitch like Woods', only that he brought out the ends of the ligature at different openings in the skin, and included a bridge of skin in the knot, the ligature was allowed to slough out.

Syme used a rectal bougie in place of Wütz er's expensive apparatus, passing his ligature through a hole in the end of the bougie. Other minor modifications of these operative measures have been suggested by many surgeons—their very number indicating that the operation is a disappointing one. Certainly it presents no feature to recommend it in preference to the admirable truss long since invented by Mr. L'Estrange.

None of these operations act upon the internal ring, and none of them effectually upon the upper part of the canal. All of them are applicable to those hernia only which have descended beyond the external ring. Now, Mr. L'Estrange's truss exercises pressure on the entire canal and the internal ring. It is applicable to true inguinal hernia, as well as to scrotal, and if the patient will confine himself to the horizontal posture, as long as is needed after Wütz er or Wood's operation, and will afterwards wear the truss for a few months, he will be cured much more certainly and permanently than by any of the other means.

Sir Astley Cooper long since laid down the principle that all trusses must fail to cure hernia, unless they compress the canal and internal ring. Mr. L'Estrange's truss fulfils the necessary indications. It makes its principal pressure on the internal ring and neck of the sac, and the force of the pressure lessens as we pass down the canal to the external ring. By this constant pressure, an escape of intestine from the abdominal cavity is completely prevented, adhesive inflammation is set up between the opposed surfaces of the sac, and a permanent cure effected. If the patient will lie for ten days or a fortnight after the application of the

[a] Gaz. Med. de Paris, December, 1855.

truss, Mr. L'Estrange asserts, the cure will be almost certain. Even without that precaution many patients have, by its use, been cured, not only of small recent hernia, but of hernia of large size and old standing.

This truss is now used extensively both in the army and navy, and has had testimony borne to its efficiency, as a truss and as a means of cure, by the most distinguished surgeons of the day. Omitting the names of Irish surgeons who might be supposed to be prejudiced, it will suffice to say, that Ferguson, Liston, Syme, Miller, among civil surgeons, and Alexander, Bell, Carter, and Gibson, among military and naval, have given it their approval; that cases of radical cure by its use are recorded under the hands of the most distinguished medical officers of both services; and that the Academy of Medicine of St. Petersburgh has signified to Mr. L'Estrange its approval of the principle on which it is constructed. Seeing we possess such efficient and bloodless means of cure, our English and German friends must forgive our apparent neglect of their ingenious operations.

M. Bourjeaurd[a] has devised a combination of elastic bandage and air pad, which appears to be a comfortable kind of truss, but not efficient for the radical cure.

Of injection of iodine into the sac (Velpeau, Jobert, Pancoast), or subcutaneous scarification of the neck of the sac, nothing need be said. They have almost passed into oblivion as means of effecting a radical cure.

2. *Modes of facilitating the reduction of hernia.*

Malgaigne, Bransby Cooper, and Hilton,[b] succeeded in reducing apparently irreducible hernia, by a prolonged use of ice to the tumour, gentle laxative medicines (magnesia with colchicum), and sometimes the full administration of opium, with dry diet and the recumbent posture, or shoulders slightly raised.

In cases of strangulated hernia, Baudens[c] recommends ice to the tumour, with compression, where it can be borne, and elevation of the pelvis. Dr. Andrew Buchanan, of Glasgow,[d] suggests prolonged and forced expiration, so as to use traction on the intestine by means of the upward action of the diaphragm.

Other means of making traction on the intestine from the direction of the abdomen, are depression of the shoulders and elevation of the hips,[e] to which may be added the application of a jack towel or roller round the abdomen,[f] the ends of which are pulled upwards, so as to drag up the intestines.

[a] Lancet, Jan. 10, 1852.
[b] Medical Times and Gazette, May 28, 1853.
[c] Gazette des Hôpitaux, August, 1854.
[d] Glasgow Medical Journal, July, 1856.
[e] An old method revived by Drs. Jessop of Cheltenham and H. Power.
[f] Wise, H.E.I.C.—Braithwaite, Vol. xxi.

In the Meath Hospital success in reducing a hernia is frequently attained by the use of a large cupping glass applied to the surface of the abdomen, close to the ring. This acts by dragging the intestine away from the sac, and by emptying the constructed portion of its gaseous contents. For this very useful suggestion we are indebted to the respected apothecary, Mr. Parr. Strong and hot coffee, given in cupfuls every quarter of an hour, without milk and with very little sugar, seems also to have a wonderful power over the spasm of the intestine, and has succeeded in the hands of several practitioners in procuring reduction of obstinately strangulated hernia.[a]

3. *Operations for reduction of strangulated hernia.*

Baron Seutin of Brussels inserts his little finger gently along the hernia, until he gets it within the ring; he then hooks his finger and tears the ring forcibly. By this means he has often succeeded in avoiding a cutting operation.

For femoral hernia Mr. Gay's minute incision at the inside of the neck of the sac, immediately over Gimbernat's ligament, gains gradual favour. It has the advantage of enabling the operator to divide the stricture almost subcutaneously, by an insignificant wound, without, in the majority of cases, opening the sac. By means of it the mortality of hernia is reduced 50 per cent. Messrs. Fergusson, Luke, Paget, Birkett, and many others, fully approve of it, and in a few years it will, it is to be hoped, be the rule.

The objection that at times the intestine and sac may be returned *en masse*, holds equally to the taxis. This accident occurs because men forget that taxis is not, or ought not to be, at first a force exercised to push the intestine back into the abdomen, but rather a gentle and even compression of the tumour, by which it is sought to empty the intestine first of its gaseous, then of its feculent contents, before attempting to return it. Let the taxis be used properly, and very seldom indeed will the reduction *en bloc* be met with.

The extra peritoneal operation is also applicable in some cases of inguinal hernia, especially the more direct forms; and there is no reason why the effort should not be made to reduce the intestine by means of it, before resorting to an opening into the serous sac—always having due regard to the mode in which the taxis should be applied. The whole question of extra peritoneal operations for hernia was discussed, at length, in the last number of this Journal.[b]

Valuable statistics and conclusions on hernia will be found in a paper by Mr. Bryant, in *Guy's Hospital Reports* for 1856.

(*To be concluded in our next.*)

[a] Durand of Havannah, Sammut of Malta—Braithwaite, Vol. xxxvi., xxxvii.

[b] On Hernia, by Mr. M. H. Collis, Vol. xxxiii., p. 293.

TRANSACTIONS OF THE ASSOCIATION OF THE FELLOWS AND LICENTIATES OF THE KING AND QUEEN'S COLLEGE OF PHYSICIANS IN IRELAND.[a]

SESSION 1861-62.

First Meeting, November 20, 1861.

Dr. Churchill, Vice-President, took the Chair, and opened the Session with some appropriate introductory remarks congratulatory as to the continued prosperity of the Association.

Dr. Corrigan exhibited, and gave the medical history of, two substances which he had lately found used in the Isle of Salamis, and which were said to be a cure for hydrophobia. One, the *Mylabris Græca*, a fly, found in the island, and which, when pulverised, is given with the powder of the other, a plant—the *cynanchum erectum*—in the proportion of two parts of the plant to one of the fly, every second or third morning from the time the patient was first bitten. The monks of Salamis asserted that the fly was the same that was used for blistering by Hippocrates. The symptoms produced by a large dose of it are, it would appear, similar to those produced by powdered cantharides. Dr. C. was not quite satisfied that this remedy deserved all the praise it received in Salamis, where it was said to be an infallible cure, or probably, more correctly, a prophylactic. He thought, however, that it was well worthy the attention of the profession in this country.

Dr. Corrigan also mentioned another peculiarity in the treatment, in Greece, of persons bitten by rabid dogs, viz., the cauterization of the part with boiling oil. He considered that this was, perhaps, a far more effectual mode of so doing than the ordinary method adopted in this country; as it solidified all the surrounding tissues, converting them into a dense mass, and arresting absorption.

Dr. Churchill read the following paper:—

On Some of the Reflex Irritations resulting from Uterine Disease.—I have no doubt, he said, that many of the members of the society are as familiar with the reflex irritations to which I propose to call your attention as I am; and not unlikely some may not only know more, but may be able to throw light upon the best mode of treatment. That they have received

[a] These reports are supplied by Dr. B. G. Guinness, Secretary to the Association.

less notice in books than they deserve I am certain, and that they are liable to be mistaken for other diseases I know.

I shall not weary your patience by attempting to exhaust the subject, but shall confine myself to a few instances, and those strictly limited to cases for which I can answer, as having come under my own observation.

But it may simplify the matter if I first describe the disease which is most frequently the origin or starting point of those reflex irritations.

In patients subject to attacks of menorrhagia, especially in women who have borne children; or after one or more miscarriages from which recovery has been incomplete; or when both these circumstances concur; if we make an examination by the finger what we are almost certain to find is an enlarged state of the body and cervix uteri, with increased weight, some depression, and a patulous state of the os uteri. There will probably also be more or less tenderness, and a moist condition of the vagina. If we examine with the speculum we may find, in addition, that the mucous membrane of the upper part of the vagina is of a much deeper colour, brighter or darker, as the case may be, than natural; and that there is an excoriation (I protest against applying the term ulceration to this disease) around the os, and extending in different degrees over the cervix. The surface is deprived of epithelium, and looks raw; it may be partly smooth or granular; and but rarely is the mucous membrane entirely destroyed.

I have not intended to sketch a formidable disease, but a very common one; it does not affect life; it never takes on a malignant character, but I do not think it gets well spontaneously; it may last many years; it interferes with important functions, and it gives rise to broken health. If we feel any surprise at this we have only to remember that from 18 or 20 to 45 or 50, the uterus (and ovaries) are the very central organs of female life; that the regular fulfilment of their functions is as essential quite to health as that of the heart, brain, or stomach; and that deviations are more sensibly felt in the case of the uterus than of any other organ; whilst the fulfilment of some of its functions involves special peril to its integrity.

However, I do not propose to describe the general effects of uterine disease upon the constitution, though there is much yet to be said upon that subject also; but rather some of its more local effects.

1. Two years ago a lady, whose mother had recently died of cancer uteri, told me that she was sure that she was getting that disease, in consequence of a permanent sense of heat across the lower belly. A tactile examination enabled me to satisfy the lady that she was not suffering from cancer; but the finger revealed nothing else. A few months ago the lady called upon me and told me that the uncomfortable sense of heat had continued ever since, and that the catamenia had greatly diminished

in quantity. An examination with the speculum revealed an erosion about the size of sixpence, with some congestion of the cervix. I felt some hesitation in attributing her suffering to a cause so apparently trivial; however, I proposed to test its influence by curing it, before trying any other remedy for the heat.

I applied the strong tincture of iodine twice a week, using nothing in addition but vaginal injections of cold water. The erosion soon began to heal; and in exact proportion the sensation of heat diminished until it entirely disappeared.

2. Some years ago I was asked to see a lady who was said to be suffering from rheumatic pains, and also from whites. I found her complaining of a pain apparently in the symphysis pubis, and a much more severe one in the right knee, sometimes extending up towards the hip. Much local treatment had been tried in vain. On examination I found a very large excoriation around the os uteri, with redness of the mucous membrane and swelling of the cervix. I succeeded in curing this by the usual means; and even before she was quite cured the pains disappeared, and did not return.

3. Last year I was consulted by a lady, October 28, who walked into my study with great difficulty, in consequence of a pain along the sciatic nerve, from the hip, and extending sometimes to the foot. She could neither stand nor walk without great pain, and her health was failing for want of exercise and from continual suffering. She had no children; and a little inquiry induced me to think that there was something wrong with the uterus. On examination I found the organ very much retroverted from congestion and enlargement of its fundus; and this, it occurred to me, was probably the cause of the sciatica, either from positive pressure, or, as the source of reflex irritation. I set about curing the enlarged and retroverted condition of the uterus by cold injections, rest, and the application of the tincture of iodine, and in due time the organ regained its normal size and position, and the sciatica had entirely disappeared; the lady being able to stand and walk as usual.

4. Within a few months a lady was sent to me apparently labouring under sciatica, for which everything had been tried. It was painful to stand, and still more to walk; in fact she could not walk more than a very short distance. The pain extended from the left hip down to the knee; always present, even in bed; it increased in paroxysms, and in the upright position. Her health had become impaired from want of exercise, her digestion was deranged, her appetite diminished, and the bowels constipated. She was sent to me because she complained of occasional leucorrhœa, in hopes that, perhaps, some uterine disorder might be detected sufficient to account for the pain in the leg. I examined, and

found the uterus congested, but not to any great degree; the cervix was red, and there was an excoriation less in size than a shilling. Notwithstanding the similar cases I had seen, I could hardly believe that this condition of the uterus—the congestion and erosion—had caused all the suffering. However, the practical test was easy. I set about curing the uterine affection; and, as I succeeded, there was a progressive diminution of the pain and lameness; and finally it ceased altogether, and the lady can now walk or dance as well as ever, to the great improvement of her general health.

I could give more cases; but these may surely suffice, as I do not wish to trespass too largely on your patience.

I wish now to ask your attention to another form of reflex irritation of perhaps greater interest, because much more frequent, more difficult to manage, and about some points in whose clinical history I am not quite clear. I allude to irritability of the bladder dependent upon some form of uterine disturbance. With the slighter and more evident cases I am sure all are familiar; but the severer cases are not unfrequently treated for disease of the bladder itself without success, so far as I have seen.

Perhaps the most familiar illustration I can give of such cases is the frequent desire to pass water in early pregnancy. Of course this may arise partly from mechanical pressure and partly from reflex irritation after the second month; but I saw a case the other day in which it set in immediately after conception, when it could not have been caused by pressure.

The affection may be characterized either by an increased frequency of passing water without pain or difficulty, or by the addition of pain to the frequency, or by tenesmus, a painful and urgent effort to force out a few drops after the bladder has apparently been emptied.

In the majority of cases nothing is learned from the urine; it is natural in appearance, of the usual specific gravity, not albuminous, nor depositing mucous, and, on analysis, presenting its usual constituents. I have met with one or two remarkable exceptions to this rule, however.

I need not say what a distressing affection this is. Even the minor degrees give trouble enough; but, when severe, the incessant irritation, the frequent pain, and the loss of rest, wear out the patient, and render her pale, languid, and exhausted. The general health soon suffers from the functional disturbance, the appetite becomes fastidious, and the spirits depressed, whilst the fear of some dreadful disease haunts the patient.

Now, I have found this reflex irritation to arise from various conditions of the uterus and vagina. I have known it occasionally in young unmarried women, dependent upon menstrual irregularities, chiefly a scanty secretion; upon acute vaginitis (not gonorrhœal), upon menorrhagia

without erosion, upon congestion, or chronic inflammation and erosion of the cervix. One remark I have made, viz., that the amount of irritability and distress may be very great, and the local lesion very small; or the reverse; in short, that the suffering bears no proportion to the primary disease.

But some one will probably ask, what proof have I that this affection is only a reflex irritation? In the first place (with a few exceptions), the urine preserves its natural composition, even though the irritation has been of long standing; and secondly (with few exceptions), you will cure the vesical affection without direct treatment, which I take to be conclusive.

But now for these exceptions. I have said that the irritability may last for a long time with no change in the character of the urine. I have seen this so after months or even years of suffering. Yet in a few cases of long standing, where there was great tenesmus and pain, I observed a mucous deposit, and even a little blood; in others there was an increase of the phosphates, or a deposit of purpurates.

In the majority of cases I do not think there need be any difficulty in diagnosis, unless the inquiry should be limited to the vesical symptoms. The natural condition of the urine, on the one hand, and some such uterine derangement as I have described, on the other, will at least show the possibility of its being of a reflex nature. An examination with the catheter will ascertain that there is no stone in the bladder, and the relief of the primary affection will be followed by the gradual subsidence of the irritability of the bladder.

But in the severe cases, the diagnosis is not quite so easy. Symptoms almost identical result from calculus in the bladder, and even an experienced hand may not always detect this. Not very long ago I was asked to see a young lady who suffered very much from the necessity of frequent micturition, especially at night, with tenesmus and some pain. It was remarked that whenever the catamenia were irregular, these symptoms appeared, or if present, were aggravated. She had had intervals of complete remission, with relapses at different periods. Although the condition of the urine led me to fear either stone or some disease of the bladder, yet as she had been examined for stone before I saw her, without any being detected, and as there seemed to be some connexion between the irritability of the bladder and menstrual irregularity, I set myself to regulate the latter, in the first place. Under the usual treatment, after some time, she did menstruate, and there was some improvement in the character of the urine, and a diminution of the distress, but it was too slight to satisfy me, and I was allowed to examine the bladder. After some time I succeeded in detecting a stone, which was subsequently removed. Careful examination, I believe, is the only means to be depended upon for diagnosis between these two diseases. I

have seen quite as severe suffering when there was no stone. I recently saw a case with Dr. Macready, where the frequency, the tenesmus, and the pain, were very great, and where sometimes blood and sometimes mucous escaped from the bladder. There was no stone to be discovered, and the irritability was relieved by injections, and by the cure of the erosion.

As to the treatment of the simpler cases, I need not detain you long. But we must be on our guard against promising a *speedy* cure. The erosion or congestion will not be rapidly cured, and the relief of the secondary distress may not commence until the cure of the primary cause is nearly complete. I have a lady under my care at present, who consulted me three or four months ago for reflex irritation of the bladder, and also of the breasts, which nearly resembled those of early pregnancy, arising from congestion and erosion of the cervix.

The latter is now quite well, yet it is only a few weeks that these reflex irritations have ceased to trouble her. I gave no remedies for them.

The first point is, to make sure that there is no stone, by a careful examination, and no organic disease, and then cure the primary affection Each one has his own pet remedy, probably; some use nitrate of silver—some more heroic applications. For myself I have found an occasional touch of nitric acid, and the regular application, twice a week, of strong tincture of iodine, with syringing the vagina daily with cold water, the most effectual remedy. After many years' experience, I must say, that I know of no application to be compared to the iodine; it not only diminishes the congestion and cures the erosion, but it reduces the bulk of the uterus. If, however, there be any vaginitis, the iodine ought not to be used until that is cured, which will probably be best effected by a solution of nitrate of silver.

If the menstruation be in excess, it must be controlled, as otherwise we shall hardly cure the congestion. I have found that this can be done either by ergot, Indian hemp, gallic acid, or Ruspini's styptic.

In the severer cases, when we have satisfied ourselves that there is no stone, I use the same remedies, local and general, as in the simpler ones, but, in addition, I have found great advantage from throwing into the bladder a solution of nitrate of silver (gr. v. to gr. x.) with a little (gr. ii. to gr. v.), of the extract of Belladonna, or (gr. ii.) watery extract of opium. This should be retained a few minutes and then expelled. It generally gives pain the first time, but less afterwards, and it may be repeated two or three times a week until relief be obtained.

I need hardly say that the state of the constitution and general health should be carefully regulated, if necessary, but in many cases I have found the local treatment all that was required.

Dr. Osborne gave the result of his experience in the use of the *Harrowgate waters.*

He considered that the effect of these waters was very generally misunderstood. They were said to be purgative; but Dr. O. was of opinion that this was not the case. Any effect they had in the way of a laxative was on the small intestines; but the ascending colon would be found plugged. It was necessary to use purgatives whilst taking these waters; for, though the digestive organs were apparently in full vigour, a false diarrhœa was established which could only be relieved by free purgation. He said that the principal spa was, in its constituents, nearly identical with sea water.

The Second Meeting of the Session was held on 18th December—Dr. Fitzpatrick in the chair. The Association adjourned, without transacting any business, on account of the recent death of the Prince Consort.

PROCEEDINGS OF THE PATHOLOGICAL SOCIETY OF DUBLIN.[a]

Twenty Fourth Annual Session—1861-62.

Ligatured Artery.—Dr. Bennett exhibited a specimen which showed the changes that occur in the arteries of the thigh after ligature of the superficial femoral, for the cure of aneurism in the popliteal space. The man, aged 50, from whom the specimen was taken, died last week in Sir Patrick Dun's Hospital, of disease of the lungs. He had been operated on at Jervis-street Hospital about four years ago, and was discharged cured. At the *post mortem* examination the clinical clerk removed the specimen, but under unfavourable circumstances, which accounts for its not being as perfect as it should be. The common femoral is of its usual size, and presents no change except a slight atheromatous deposit in its coats. The superficial femoral is contracted to less than half its natural diameter, from its origin down to the seat of the ligature, a distance of two and a-half inches. At the seat of the ligature it is completely closed for about half an inch, and from this point down to the origin of the anastomotica magna is again open, and of about the same diameter as the upper patent portion. Beyond the anastomotica magna, the popliteal portion of the vessel is converted into a fibrous cord, as far as the remains of the aneurismal sac, which is about the size of a large filbert, and has undergone calcareous degeneration to such an extent as to require the saw for its division. Below the tumour the vessel is obliterated as far as it has been removed. The profunda femoris, and its branches, are enlarged to nearly double their normal size, as is to be expected in con-

[a] These reports are furnished by Dr. R. W. Smith, Secretary to the Society.

sequence of their having to carry on the circulation of the limb. The principal points of interest in the specimen are the short extent of the occlusion of the vessel at the seat of ligature, and its patent condition below this point to the origin of the anastomotic branch, which is larger than normal.

The former of these peculiarities is accounted for by the occurrence of two small branches, one immediately above, and the other below the seat of ligature. This peculiarity has been observed in a large number of the reported cases. The latter point of interest, namely, the patent condition of a large part of the vessel below the seat of ligature, and the increased size of the vessel leading into the end of the patent portion, shows that the stream in the anastomotic artery was reversed, and that this vessel must have circulated the blood through the sac for a time after the application of the ligature, and so led to its gradual obliteration. This point shows that the principles of the cure of aneurism, by ligature, and by pressure, are the same—namely, the diminution, not the stoppage of the stream through the sac, so as to favour a gradual deposit of fibrin, and not the coagulation of blood in the sac. This conclusion is borne out by the phenomenon of recurrent pulsation, which occurs in the sac some short time after the operation in most cases, indicating that the collateral circulation has been established.—*November* 30, 1861.

Cancer.—Mr. M. H. Collis said he was indebted to Mr. Smyly for the opportunity of bringing forward a case of cancer, which presented some peculiarities. Knowing the interest he took in such subjects, he kindly allowed him to be the medium of offering it to the Society. The patient was a woman about 50 years of age, and exceedingly hale and healthy-looking—the mother of two children. About a year and a half ago she met with a hurt, and immediately afterwards observed a small tumour, about the size of a walnut, or rather less, in the breast. It merely gave her mental annoyance until four months ago, when it seemed to grow rapidly; she cannot say whether she received a second injury then; she complained of occasional darting pains, of some severity, but the distress of mind from the presence of the tumour annoyed her more than the pain, and she wished to have the tumour removed. Upon presenting herself at the Meath Hospital, about a week ago, the surface of the tumour appeared to be extremely red, and the skin in the neighbourhood was of an erysipelatous tinge. The skin over the most prominent part of the tumour, though not adherent, was tightly stretched. There was also considerable enlargement of the glands in the axilla. In the neighbourhod of the tumour tubercles of a small size were distributed over the skin, and there were suspicious points of redness scattered about in the region between the two breasts. Her condition was most unfavourable for operation, and it was a question for consideration, whether,

under the circumstances, they would be justified in interfering. They had her earnest wish, however, for the operation to guide them in their decision, and this mainly led Mr. Smyly to operate. She said if it were not removed she would "hack it off herself," as she was determined not to return home with the tumour on her. Sometimes, after removal of tumours in this condition, the skin heals with great rapidity, and, although the disease inevitably springs out afresh, the patient has a considerable interval of ease, and this was a further inducement to yield to her request. As to her chances of permanent benefit from the operation, they were very small. Much evidence could not be derived from statistics on the subject; statistics did not apply to special cases; those, however, collected by Mr. Paget were rather favourable to operation, when it could be done in the early stages of the disease. Mr. Collis here exhibited the section of the tumour, and proceeded to remark, that there were, at least, three remarkable points of interest about the growth. Upon the thinner lower portion of the tumour they found a hard, dense, resisting, semi-cartilaginous material. Where the growth was of rapid development, it became softer—of a grayer colour—much more elastic, and yielding a larger quantity of juice on pressure, or when scraped. Again, where the skin was most tightly stretched, there was a large amount of vascular tissue intermingled with the encephaloid material. They had in this specimen examples of three varieties of cancer—encephaloid, schirrus, and that degree of encephaloid which was about to become fungus hematodes.—*November* 30, 1861.

General Paralysis of the Insane.—Dr. Banks made the following communication, and exhibited the brain and frontal bone.

A man, aged 25 years, was admitted into the Richmond Lunatic Asylum, on the 27th of October, from the Whitworth Hospital, where he had been for three weeks previously, under the care of Dr. Gordon.

His mother stated that he had convulsions in infancy, but, with the exception of that attack, he had enjoyed good health. At the age of 13, being then a remarkably strong boy, he was kicked by a horse in the forehead, and remained in a state of insensibility for 24 hours after the receipt of the injury. In the progress of the case, small pieces of bone came away from the wound, which, however, was perfectly healed at the expiration of two months, leaving a deep depression of a semicircular form on the forehead. He was occasionally noisy and restless, and difficult to be managed; but there was no marked change in his condition until the morning of the 27th of November (one month from his admission), when he was seized with epileptiform convulsions, which recurred at intervals until his death, which took place in 36 hours. He was perfectly unconscious from the moment of the seizure.

The necropsy, performed 24 hours after death, revealed the following

morbid appearances:—On dividing the scalp, it was found to be gorged with blood, and at the situation of the deep depression on the forehead, it was so intimately attached to the frontal bone, that it was with difficulty removed, and the bone itself had a groove, corresponding to the cicatrix, of considerable depth.

On the internal surface of the frontal bone there was also a groove, and to it the dura matter closely adhered. In the neighbourhood of the depression, the bone was extremely thick and dense from the deposition of osseous matter. On the surface of the brain, corresponding to a ridge at the seat of the fracture, there was a well-marked depression, and here the cerebral substance was hard; and in this part, which was probably the remains of a cicatrix, Dr. Bennet, who made an accurate examination, found a little hard mass, which was evidently bone. The consistence of the brain was normal, but there was extreme vascularity of all the contents of the cranium. There was slight opacity of the arachnoid membrane. The spinal chord was not examined.

This case is interesting, from the fact of mental alienation, associated with general paralysis, occuring in a person who, thirteen years previously, had received an injury of the brain. How much the fracture of the frontal bone, and the lesion of the cerebral substance beneath, contributed to the production of the disease, is difficult to determine. For thirteen years, the patient appears to have been in the enjoyment of mental and bodily health.

The course of the disease, which proved fatal, was unusually rapid, (three months.) With respect to the pathology of general paralysis, it may be observed that there is nothing constant. There was no want of intelligence observable in the boy, his capacity appearing to be equal to that of most young people of his age. When he grew up, his habits were irregular; he was intemperate, and he had syphilis more than once. Three months before his admission into the Asylum, he had a fit, which, from the description, must have been epileptic, and after this his family noticed a complete change in his manner; to use his mother's words, he took strange fancies in his head, believing that people were conspiring together to injure him, &c., &c. While in the Whitworth Hospital, he was heavy and stupid, slow in answering questions, and at times incoherent. He presented, on admission, the ordinary symptoms of the general paralysis of the insane; his articulation was very imperfect; there was a tremor of his tongue and upper lip, and he was unsteady in his gait, the muscles having lost the power of co-ordinate action.

Calmeil, after detailing the morbid appearances observed in many cases of this most hopeless form of disease, says the disease arises from "some one modification of the brain, whose nature we have not yet learned to appreciate." Notwithstanding the labours of Baylè, Esquirol, and other distinguished alienists, at home and abroad, in this field of

inquiry, little light has been thrown on the pathology of general paralysis. The conclusion of Dr. Bucknill is probably correct, who believes that "general paralysis is a disease of nutrition, affecting the whole nervous system."

The subject, however, is one which is well worthy the attention of all who are engaged in the investigation of the pathology of mental disease.—*November* 30, 1861.

Aneurism of the Abdominal Aorta.—Professor MACNAMARA said, that, by the kind permission of Professor Stokes, he was enabled to lay before the Society a specimen of aneurism of the abdominal aorta. The man had been sent to Mr. Macnamara some two years ago, suffering from severe pains in the lumbar region, the cause of which was very obscure. At first he (Mr. M.) was inclined to ascribe them to some renal affection, in which supposition he was, to some extent, borne out by the state of the urine, and prescribed some trifling remedies, which, for the time, gave relief, and he lost sight of the patient until the month of August last, when he returned, complaining of the pain being worse than ever, upon which occasion he was taken into the Meath Hospital, under the care of Dr. Hudson. Mr. Macnamara held in his hand the report of the case, and of the *post-mortem* examination, as taken by his friend, Mr. Arthur Wynne Foot, which entered so fully into every particular as to leave him little else to do than read the report, and show the morbid specimen.

John Mullen, aged 54, married, was admitted into the Meath Hospital, under Dr. Hudson, August 19th, 1861, suffering from severe pain in the spine and loins, and stiffness of the back. For these symptoms he could assign no cause; he had never been a day ill in his life, and had not strained himself. It was soon ascertained that he had been very intemperate, and that the larger arteries were diseased. The first attack of pain occurred four years before admission, and was referred to the left kidney. This pain did not remain very long; but for the last two years there has been pain constantly present in the lower part of the spine, in each lumbar region, spreading over the back, and, within the last three or four months, shifting downwards into the left hip joint. This pain was less acute when the bowels were free; and, when it was very severe, his urine was clear, and free from sediment; whereas, when he was in comparative ease, the urine regained its usual turbidity, from deposition of lithates. The decubitus which he found most comfortable was on his back. At an early period of his illness, he lay on his face with relief, but, after admission, could only keep in that position for a few minutes. Standing or sitting were attitudes he was very reluctant to assume.

On the 19th of August, the hand, when applied to the left side of the lower dorsal vertebræ, felt a pulsation outwards, over a space about four

inches long. In this situation there was a fulness, but no distinct tumour. Pressure on this part did not give pain. A murmur was very distinctly heard there whilst he was in the recumbent position, but disappeared on his sitting up. A rough murmur was heard along the whole length of the spine. *The heart's impulse was very violent*, tilting up the lower ribs at each contraction. He is much distressed by this violent action, which is always in proportion to the severity of the pain.

August 23rd.—Murmur and pulsation were evident from the inferior angle of left scapula to the crest of the ilium at same side. By degrees a tumour became evident at the left side of the lower dorsal vertebræ, and, on the 30th of September, there was, in that situation, a large, well-defined prominence, with strong, eccentric pulsation, the seat of burning pain, shooting thence into the epigastrium, and down to the heels. Firm pressure on the abdomen relieved for a time this sensation, but painting the tumour with tincture of aconite was more effectual. The pain was always worst at night. During this time there were evidences of the advent of another tumour on the right side of the spine, opposite the middle dorsal vertebra. Pulsation, fulness, and at last a distinct tumour appeared the second week in October, at the inferior angle of the right scapula. In neither tumour was there any murmur now heard, but the pulsation was most marked. About this time he suffered much from anesthesia in the lumbar regions, and had some attacks of most violent pain, during the continuance of which the expression of his face was an index of the intense agony he suffered, and for the relief of which large doses of opium (sixty minims of the liquor opii sedativus) were all but ineffectual. His greatest relief was afforded by brandy, which alleviated the pain in a wonderful manner, when opium, hyoscyamus, and other sedatives, proved useless. During all this time, the average rate of his pulse was 80 beats in a minute.

November 7th.—A transverse pulsation, connecting the two tumours beneath the spines of the vertebræ, began to be felt, and there were signs of diffusion of the tumour. On the 23rd of November, the left nates and upper part of the thigh were œdematous; the lower tumour measured eight inches in length, by seven in width; the upper one five inches long, by four and a half across. His great difficulty was now how to lie without pressing upon either prominence, and a trial of every means to effect this failed in accomplishing its object. He was found dead in his bed at 3 o'clock, a.m., December 2nd, 1861, having expired without a sound.

Post-mortem examination, seven hours after death.—Body cold; surface very much blanched; muscles in front of chest, thin, soft, wasted; no fluid in pericardium; surface of heart, especially right side, loaded with fat; valves healthy; organ *not enlarged, but, on the contrary, rather diminished in size;* muscles of left ventricle soft; of right, very soft and thin. Aorta, from commencement, full of patches, slightly raised, of light

yellow deposit. Left lung adherent to ribs, nearly everywhere; lobular emphysema in lower lobe. Some fluid in bottom of pleural cavity. In abdomen, about two pints of yellowish fluid; no peritonitis, recent or old. Intestines were empty. Behind the peritoneum the cellular structure was all black, from extravasated blood, as were also the muscular coverings of the tumours. When the chest and abdomen were eviscerated, two tumours came into view, presenting no rupture on their anterior aspect. The body was turned round, and an oval portion cut out, including the vertebræ from the middle dorsal to the fourth lumbar, extending as far outwards as the angles of the ribs. The muscles on the left side of the back were infiltrated with blood, softened, and decayed; mere pressure of the finger was sufficient to break into the sac, when the integument was removed. On slitting up the abdominal aorta along its whole anterior aspect, a rent was seen in its posterior wall, four and a half inches long, opposite the last dorsal and three first lumbar vertebræ, leading into an enormous double cavity on each side of the spinal column; that on the left side being about nine inches long in its greatest diameter; that on the right, four inches—this was fully packed with coagulated blood, whilst the lower portion only of the cavity on the left side was so occupied—the ribs on the left side slightly, and the vertebræ deeply eroded, formed part of the sac, whilst the intervertebral cartilages had suffered but slightly.

Mr. Macnamara then proceeded to draw the attention of the members of the society to this specimen. The tumour on the right side was now more prominent than that on the left, in consequence of the latter having been, to a great extent, exhausted of its contents by the infiltration of the blood into the neighbouring muscular structure which posteriorly formed the wall of the sac, and which was so completely disorganised that he had no doubt that, had the patient lived a few days longer, the slightest motion would have caused its rupture, and the death of the patient from hemorrhage; a form of death, which, as matters now stood, he did not think this patient had undergone. Mr. Macnamara being now inclined to attribute the cause of death to enfeebled cardiac action, and consequent fatal syncope, rather than to hemorrhage, the quantity of blood effused evidently being the result of a slow creeping exudation rather than of a rapid gush, and, although considerable in quantity, still not sufficiently so, *per se*, to be attended with a fatal result. The condition of the heart threw great light on the benefit that the patient experienced during life from the exhibition of stimuli. The *post mortem* examination also disclosed the interesting fact that its violent action during life was not due to hypertrophy of the organ, but *to its position*, superimposed on the sac of the aneurism, which communicated to the heart its own impulse, giving rise to that "jogging" action to which attention had first been drawn by Dr. Hope. The extraordinary size of

the rent through which the blood had become diffused was also a remarkable feature in this interesting case, it being fully, as the members might observe, of the length described by Mr. Foot. The unhealthy condition of the artery itself was worthy of observation, the coats being capable of being torn with the very slightest effort, and thickly studded with atheromatous deposit. The communication between the sacs on either side was in front of the vertebræ, and perfectly open. The vertebræ themselves had undergone considerable destruction, their bodies being deeply eaten into, whilst the intervertebral cartilages exhibited but slight alteration, and that the corroding action was not limited to the vertebræ, an examination of the ribs would prove, those on the left side being sensibly eroded. These were the most remarkable features of this most interesting case of aneurism, which Mr. Macnamara considered worthy of the attention of the society, on account of its great size, the existence of the double tumour, the vast opening in the sac, the greatly diseased state of the vessel, the long duration of the disease, and the great obscurity attending its diagnosis previous to its coming under Dr. Hudson's care.—*December* 7, 1861.

Cirrhosis of the Liver.—Dr. MacSwiney exhibited the liver and spleen taken from a man who had been under his care in Jervis-street Hospital. He died about a week ago, and his history might be thus briefly stated. He was forty years of age, and about ten years ago began to feel in failing health, lost appetite and flesh, had frequent sick headaches, and was subject to vomiting. After suffering under these symptoms for some time, he commenced to feel distress in the abdominal region; which, he became aware, was somewhat swollen. He sought relief in the Richmond Hospital; had the operation of tapping performed by one of the surgeons of that institution, and came out quite recovered. He did not describe anything indicating an acute attack of peritonitis at this time. He followed his trade of a painter pretty regularly; but was a person of very intemperate habits. He suffered, from time to time, from derangement of stomach and general ill health. He came to Jervis-street Hospital sixteen days ago, and presented the following symptoms: he had enormous ascites. There was total loss of appetite, and he was very much wasted. His aspect was drowsy, heavy, and vacant, and he was most unwilling to answer questions. He complained of extreme weakness. Although he was not jaundiced, his skin was of an unusually dusky, sallow tint, and the conjunctivæ were yellow. He passed urine in small quantities, it was high coloured, and deposited red lithates copiously. The diagnosis inferentially made, was, that he was suffering from cirrhosis of the liver, and palliative remedies alone were given. A *post mortem* examination was made by one of the most industrious students of the hospital, Mr. O'Dwyer. The liver was small, and the spleen very large. He believed it

was pretty generally held, as the result of experience, by physicians in this country, that *enlargement* of the spleen bore a tolerably regular proportion to the *diminution* of the size of the liver in cirrhosis; the spleen, in fact, seeming to make an effort to perform the duties of which the liver was no longer capable. He knew it was not so held by foreign authorities, nevertheless it was probable the fact was so. The liver, in that case, did not present many, or very well-marked nodules, but there were some portions of it elevated, which there could be, he believed, no doubt, were due to the contraction of the cellular tissue, or so-called capsule of Glisson, which was always met with in the disease. Upon making a section, a number of small, roundish, distinctly granular, dark-grey coloured bodies might be perceived constituting the internal structure of the nodules. These granules were divided from each other by whitish bands of hard, dense tissue. He might mention, that Mr. O'Dwyer had observed, when making the autopsy, a considerable amount of thin filmy membrane which completely matted the intestines together, and could not be easily broken up, an infallible proof of some antecedent peritonitis. The disease was usually found to exist in spirit drinkers, and it did so in the present instance. It occurred to him that it was produced, in the majority of cases, from the direct action of alcohol on the organ—and if this was the case, if it *were* caused by the action of alcohol imbibed in an undiluted state, and passing through the liver more or less undiluted still, it would be in accordance with the opinions of Lallemand, Duroy, and Perrin, as expressed in their recent work, "*Du Role de l'Alcohol*," that no decomposition or destruction of the spirit ever occurs in the system, but that it is eliminated sooner or later, as the pure alcohol it had been imbibed. That was, as was known, contrary to the opinion of Liebeg, but, of course, he would not enter further into that question now.—*December* 14, 1861.

Tuberculosis.—Dr. Moore exhibited part of the viscera taken from a man, aged 32; he was admitted into Mercer's Hospital on the 1st of November, suffering from uncontrollable diarrhœa; he had all the appearance of one labouring under extreme anemia and exhaustion, the result of general tuberculosis, he was œdematous and ascitic; he passed urine in a diminished quantity; there was no evidence of special cardiac or pulmonary disease; the liver was enlarged, and he complained of great pain in the back. On examination the urine was almost solid with albumen. The diarrhœa was partly controlled by treatment; and attention was then directed to remove the ascites, but without any sensible effect. At the end of some weeks he complained of violent pain at the base of the right side of the thorax, this was alleviated, but it left him totally prostrate. He died on Wednesday last. On making an examination of the viscera, the kidneys weighed between seven and seven ounces and a-half, and were slightly enlarged.

Besides this enlargement and increase in weight, the cortical substance was completely anemic, and only a few vessels of a stunted appearance could be seen in it; the cortical substance was much increased in diameter, its surface smooth and covered with an opaque fluid; the pyramids were of a pale red, their base presenting a rugged appearance from the extension of the cortical substance between the tubuli. On the whole, they presented a very good specimen of fatty renal degeneration, as described by Bright.

The liver, which, during life, filled the right half of the abdomen, as far down as the iliac region, weighed five pounds and a half, the right lobe being especially enlarged; it presented a nodulated, uneven, feel to the hand, and on cutting into its substance, yellowish cheesy deposits about the size of a large pea were observable; these masses were much larger than similar deposits usually met with in the lungs, but were isolated, and did not appear to exceed a dozen in number. The liver, in general, was pale and friable; there were no tubercular deposits in the spleen. The mesenteric glands were enlarged, and the intestinal tract generally showed evidences of a chronic inflammatory condition.

On opening the thorax, the heart and pericardium were enveloped in fat, the right lung was adherent to the diaphragm. In the substance of this viscus, there were traces of recent tubercular deposits, and the lower half of the lung generally was engorged; the upper portion of the right and the whole of the left lung seemed free from tubercle; the bronchial and cervical glands were enlarged. This case is interesting as a specimen of hepatic tuberculosis; this viscus not being so frequently the seat of tubercular disease as is usually supposed, and rarely as a primary affection. It must, therefore, be regarded as an evidence of advanced tuberculosis generally.—*December* 14, 1861.

Osteosarcoma.—Mr. Hamilton presented a femur with this disease, and said, that the man from whom the specimen was taken had felt some pain in the lower part of the femur for some months, and there was slight swelling near the knee, but he was not prevented from following his usual pursuit in the engine department of one of the railways. On one occasion, when walking, his foot came against something, and he fell, and broke his thigh. He was seen by Mr. Burke, of Phibsborough, and treated in the usual way for broken femur. At the end of six or seven weeks, it was found that his general health was suffering, and Mr. Hamilton was asked to see him in consultation with Mr. Burke. The man was apparently perfectly healthy; he was about 28 or 30 years of age; but he was much too fat for a person of his time of life. On removing the splint, he found an ununited fracture. The thigh, at that part, was perfectly flexible, and there was, besides, a considerable degree of swelling at the seat of the fracture. There was a solid wall of bone

on the outside, and it appeared not unlike a necrosis, the bony case of which had given way. There was no alteration of the axis of the femur, nor shortening, which was rather peculiar under the circumstances. There was no eversion of the foot. He recommended a starch bandage, and saw no more of him for ten days or a fortnight, when he came to the hospital, and was admitted. The swelling was then very considerable; the starch bandage was not removed, but the chief attention was now directed to his chest. He suffered from difficulty of breathing, cough, and hemoptysis, and, on examination, there was complete dulness under the left nipple, absence of respiration, and no râle of any kind. After a short time, he grew rapidly worse, and died. The thigh bone presented a very good specimen of malignant disease. It was a case of malignant osteosarcoma. A large oval tumour occupied the lower third of the femur, and extended a short distance from the condyles of the femur. It felt now different to the touch from what it did when he first saw the man. There was now a softness in the feel of it, and a certain degree of elasticity. When a section was made of the tumour, the thigh bone in the centre had disappeared; the tissue was firm and elastic in one part, and in another it was soft and blood-coloured. The drawing, by Mr. Connolly, exhibited the appearance of the bone on examination, and showed the deep colour of the medullary portion of the tumour. He formerly exhibited a tumour of the same character, but occurring in a different bone—the humerus; and it was very interesting to compare the two. This man fractured his arm by leaning on his elbow; but there was scarcely any bony case in that instance.—*December* 14, 1861.

PROCEEDINGS OF THE DUBLIN OBSTETRICAL SOCIETY.[a]

TWENTY-FOURTH ANNUAL SESSION, 1861–62

First Meeting, Saturday, 23rd November, 1861.

Dr. M'Clintock, in the Chair.

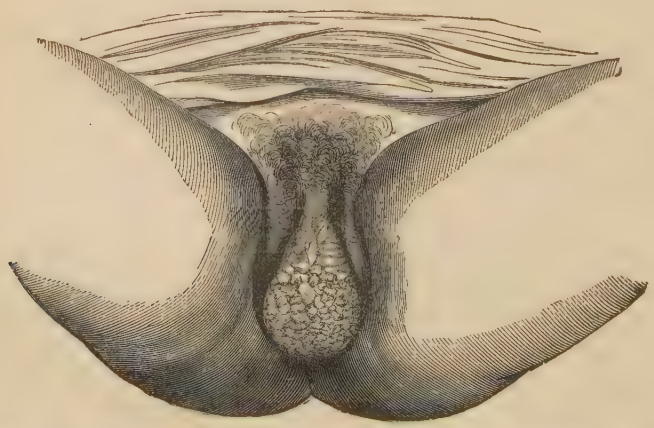
After some prefatory remarks suitable to the occasion, Dr. M'Clintock exhibited to the meeting a number of highly-finished coloured drawings (from the pencil of Mr. Conolly), and preparations, illustrating the pathology and treatment of *Tumours of the Labia, Clitoris, and Vagina*, accompanying each of these with a concise history of the case from which it was taken. The first group exemplified the *non-malignant* tumours of the labia, and contained four cases.

[a] These reports are supplied by Dr. Geo. H. Kidd, Secretary to the Society.

Case I.—*Fibrous Tumour of Right Labium.* The morbid growth, which equalled in size a large orange, was perfectly globular, and exceedingly dense and close in its structure. At its most dependent part the labium was ulcerated to the extent a dollar would cover. This ulceration involved the entire thickness of the labium covering the tumour, and exposed the surface of the latter. The patient, from whom this labium was removed, was a countrywoman about 40 years of age, and had borne several children. Fifteen years had elapsed since she first perceived any enlargement of the part. She had experienced no annoyance whatever from the tumour, except what simply resulted from its bulk and weight. The enlarged labium retained its connexion with the pelvis by a neck about equal in size to three fingers; this was divided with a bistoury, and the resulting wound healed satisfactorily. The woman was a patient of Dr. Brunker's, of Dundalk, by whom the operation was performed.

Case II.—*Syphilitic Hypertrophy of Left Nympha.* A young woman, of rather questionable character, was confined in the Lying-in Hospital of a premature child—her first, she said. It was born dead, and far advanced in decomposition. The left nympha was about the size of a large turkey egg, its surface dark coloured, and deeply fissured. This great bulk of the part was owing, in some degree, to œdema, which disappeared soon after delivery, leaving the tumour more dense and rugous, though diminished in size. She had the remains of a leprous eruption on different parts of the body. She would not listen to any proposal for the extirpation of the tumour, which did not seem to cause more than very trifling inconvenience.

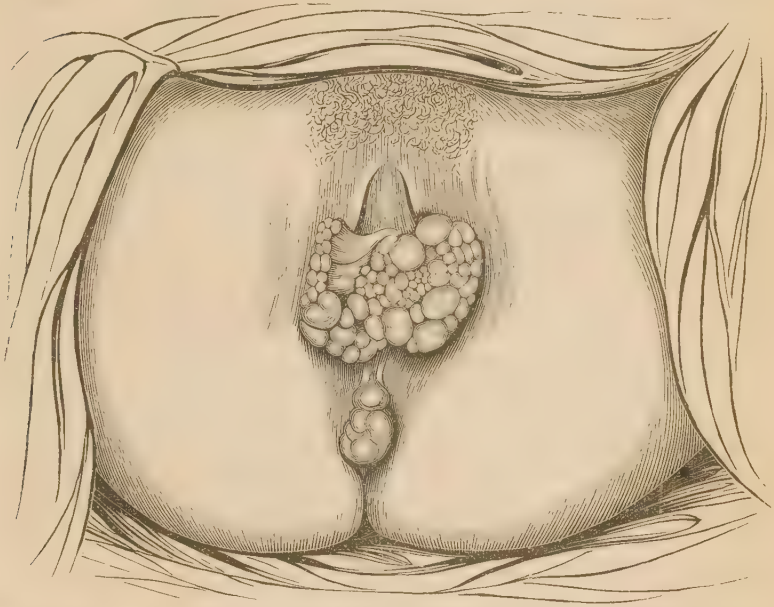
Fig. 1.



Case III.—*Tuberculated and Enlarged Nymphæ; Ecrasement.* This woman was aged 35. She was 10 years married, and had one child, nine years ago, which was dead born. She got a venereal complaint from her

husband soon after her marriage. The enlargement of the nymphæ has been coming on for the last six months, and each is now nearly as large

Fig. 2.



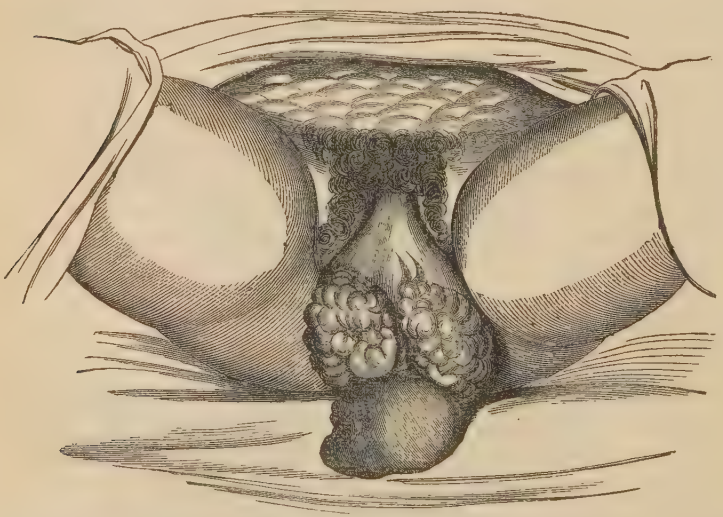
as a hen's egg. They are of a pale pink colour, and deeply divided by fissures, so as to present, in a very striking manner, a tuberculated or lobulated appearance. She menstruates regularly, but has a constant yellowish watery discharge from the vulva, with much pain and soreness of the part, so as to render sexual congress quite intolerable for some months back. Having put her under chloroform, Dr. M'C. removed the two nymphæ simultaneously, using two ècraseurs in order to expedite the operation, which altogether occupied 15 minutes. Some hemorrhage from a small artery took place, but was restrained by cold and continuous pressure for the space of two hours. Her recovery was rapid and complete.

Case IV.—*Enormous Enlargement of Clitoris and Nymphæ; Extirpation.* A countrywoman, aged 30, came under observation in March, 1856, when in the seventh month of her second pregnancy. She sought advice on account of the condition of the labia minora, and was admitted into one of the wards for diseases of women in the Lying-in Hospital. Nine years previously she contracted venereal disease from her husband. About two years ago the nymphæ began to enlarge; and within the last few months they have increased very rapidly. Three large tumours hung down from the genital fissure, of a pinkish red colour, slightly

œdematous, and very tuberculated. The centre tumour was the clitoris, enlarged to the size of a turkey's egg, and bearing some resemblance to a procident uterus. On either side of this were the nymphæ of immense magnitude and of very irregular figure. The fissures and clefts of these growths were abraded, and yielded an abundant yellowish discharge.

As the enlarged clitoris might have interfered with parturition, its removal was deemed advisable, and was effected in the following manner:— A strong silk ligature was applied around its pedicle (which about equalled the thickness of a man's thumb), and three days afterwards it was excised below the line of strangulation. The remains of the pedicle separated some days later, leaving a healthy granulating surface, which healed satisfactorily. The woman was now allowed to go home for her confinement; some weeks after which event she came back to the hospital. The neck of the growths now remaining about equalled the middle, index, and ring fingers. This was divided into three equal portions, each of which was included in a separate ligature applied as tightly as possible. Very considerable pain was thereby occasioned. On the next day the strangulation of the tumours was found not to be complete, and the neck of the growth was again included in two separate ligatures, which caused very acute pain, lasting for many hours. Two days after this the whole mass was removed with the scalpel below the ligatures. One small artery bled, but was easily checked. The remains of the tumour sloughed off in the course of a few days, and the wound healed speedily.

Fig. 3.



In the last three cases the production of the tumours may, without doubt, be attributed to a syphilitic taint in the system.

Case V.—*Hypertrophy of Nymphæ and Prepuce.* The subject of this case was a young lady, aged 20, of healthy constitution, and menstruating regularly. For some months she observed a gradual enlargement of the labia minora—at times more remarkable—especially after exercise, or at the catamenial epoch. On these occasions she obtained relief by puncturing the tumours with a fine needle, thus giving exit to some watery fluid. The left nympha was enlarged to the size of a Spanish chestnut, and so was the præputium clitoridis; the right nympha was elongated and thickened. All these parts were nearly of the natural colour, of firm texture, and free from pain. The surface was rough, but not fissured or tuberculated. The social position and moral character of this young woman, and the physical condition of the genital organs, all concurred to justify the opinion that she was perfectly chaste, and not addicted to any improper practice. For the space of two months various local and general means were employed, but without the effect of producing any diminution in the size of the tumours. She was then seen, in consultation, by Dr. Stewart (of Lucan), Mr. Cusack, Dr. Denham, and Dr. M'C., all of whom agreed that extirpation was the only mode of cure. Accordingly, on the following day, she was put fully under the influence of chloroform, and Dr. M'C. removed the diseased parts with the écraseur, by two operations. She was placed on her back, and she struggled a good deal during the operations, which both lasted 45 minutes. When she had recovered from the influence of the chloroform she complained of very severe pain in the vulva. This continued for some hours. The healing of the wound was very tedious; but the result of the operation was highly satisfactory; and she continues well to the present time, and without any reappearance of the disease.

In this case the appearance of the tumour differed in one respect from that of the three previous ones, namely, that, whereas it was only rough on the surface, they were deeply fissured and tuberculated. Dr. M'C. suggested that perhaps this difference might serve as a diagnostic mark between syphilitic and other tumours of the nymphæ, as there was no shadow of ground for suspecting any syphilitic taint in this patient, whilst there was clear evidence of the other three women having had constitutional syphilis.

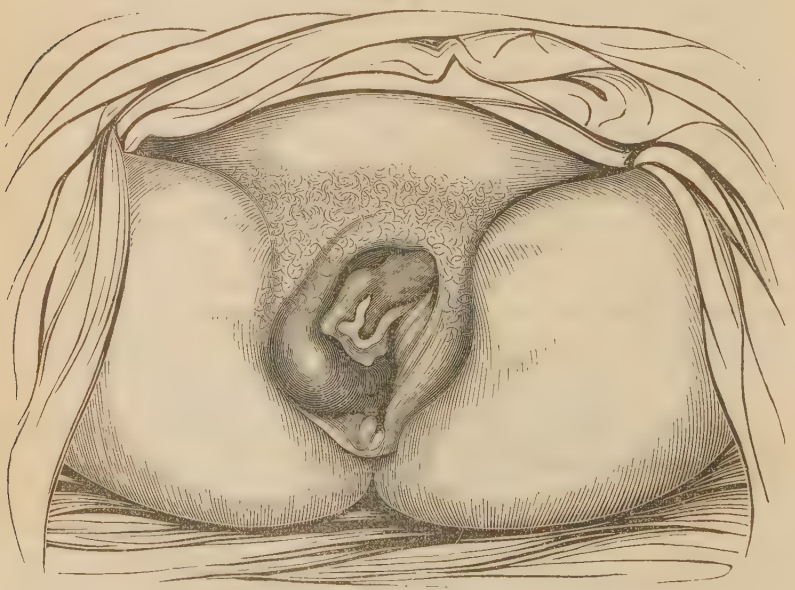
Cases of Malignant Disease of the External Genitals formed the next group brought before the meeting.

Case VI.—A. F., aged 51, had seven children, but, when admitted to the chronic ward of the Lying-in Hospital, was a widow for 12 years. Menstruation had ceased for two years; and some months before her admission into hospital she had noticed a hard kernel in one nympha, and had frequent pruritus of the part. This tumour had gradually enlarged

and ulcerated, involving adjacent parts. The seat of this ulceration was extremely hard, and patches of the surface had a black melanotic colour, which is a rare accompaniment of hard cancer. Occasionally some bloody discharge occurred, and severe darting pain was at times experienced. The vagina and uterus were ascertained to be healthy. Indurated and enlarged glands existed in each inguinal region. The chloride of zinc, and the dried sulphate of zinc were at different times applied to the diseased part, and the former caused a considerable slough to be thrown off. A vast amount of pain, and no benefit, resulted from these applications.

Case VII.—Was a woman, aged 66, who for 18 months was annoyed with pruritus of the pudenda; then a tumour made its appearance; six months after which she came under the care of Dr. M'C. The clitoris was greatly enlarged, indurated, and partially ulcerated. The swelling extended around the right side of the ostium vaginæ, forming a livid coloured tumour in this situation. Though attended with some difficulty, yet a careful digital examination of the uterus was made, and it presented no sign of disease. The case was apparently one of cancer of the pudendum, and in too advanced a stage to think of any operation being undertaken. The accompanying cut (Fig. 4) gives as good an idea of the morbid appearances as can be conveyed without the aid of colours.

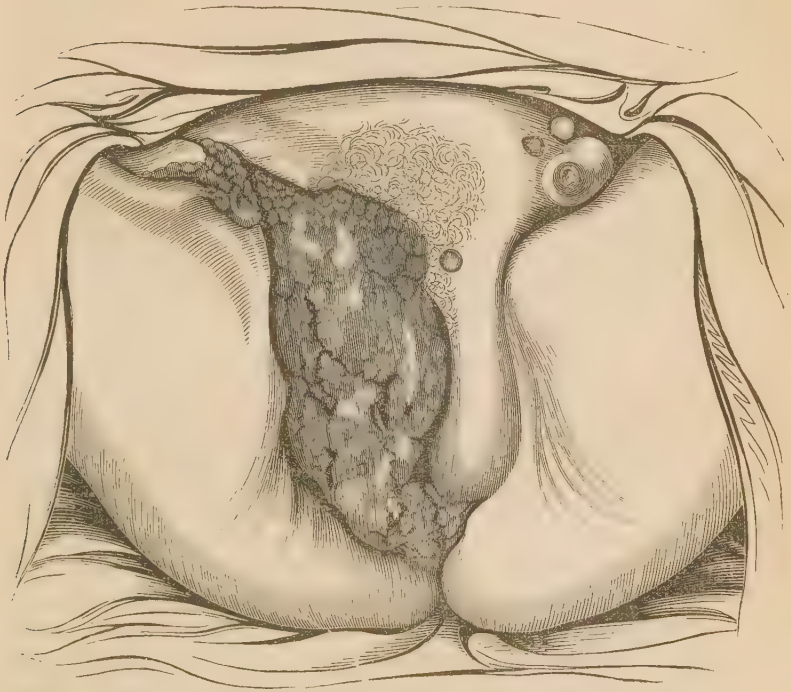
Fig. 4.



Case VIII.—Was a woman, aged 67 years, the mother of 10 children. The entire perineum, mons veneris, and right labium presented one con-

tinuous surface of ulcerated epithelial cancer. Tubercles of the same disease had formed in each groin, and were beginning to ulcerate. She stated that the complaint had appeared about a year previously, and that it was not attended with much pain at any period. She had a sensation of heat in the affected parts, and occasional difficulty in micturition, A few slight attacks of hemorrhage had taken place. The disease had begun in the right groin, and thence extended to right labium. The vagina and uterus were found to be free from every tangible sign of the disease. This woman survived for 12 months longer. The woodcut (Fig. 5) gives a correct representation of the size, extent, and granular appearance of this malignant tumour.

Fig. 5.



The three cases just related were examples of carcinomatous disease of the external genitals; and yet it is worthy of remark, that in no one of them was there any indication of the uterus being similarly affected, though in each a careful examination was made for the purpose of determining this very point.

The last group of cases brought forward by Dr. M'C. embraced four cases of Tumours growing from the Vagina.

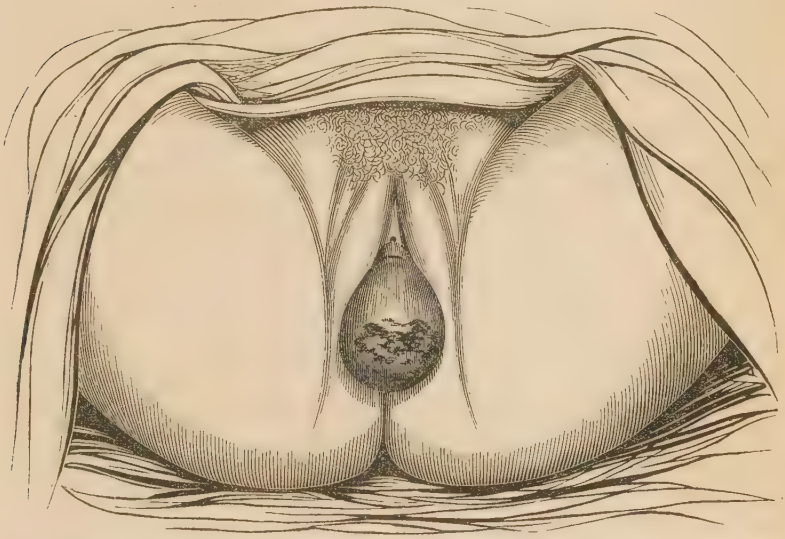
Case IX.—*Fibrous Tumour growing from Vagina; Extirpation.* A healthy unmarried woman, about 30, admitted into the Lying-in Hospital July, 1845 ; 10 months previously she began to notice a small tumour in the vagina, that has been slowly but steadily increasing in size. It always kept within the vulva till the last two months, during which time it had been generally external, and always so when she was up and exerting herself. On examination the growth was found protruding, and resembled much in size and appearance the procident womb. The subjoined woodcut (from a drawing by the late Mr. Neilan) shows the position and bulk of this tumour[a] (Fig. 6). It sprang from the lower part of the anterior wall of the vagina, extending down to within a few lines of the meatus urinarius. It had no connexion with the interior of the bladder or urethra. In structure it was very firm, and admitted of very little displacement. It was two inches in length, and upwards of four inches in circumference, and had nearly the same thickness from base to apex. Between the tumour and cervix uteri the intervening portion of vagina was healthy. The investing membrane of this tumour resembled that of the vagina, except towards its extremity, where there existed some superficial ulceration. It had given rise to no other annoyance than what resulted from its bulk and situation. She menstruated regularly, and had full control over the bladder.

Being satisfied that the bladder was not implicated in the formation of this tumour, it was determined to attempt its removal by the ligature. Dr. Johnson (then master of the hospital) and Dr. M'Clintock tightly encircled its base, keeping clear of the urethra, with a ligature of silk fishing line, confining it by means of Levret's canula. On the third day the discharge was fetid, and the ligature had formed a deep indentation all round. The ligature was tightened from day to day. On the sixth day the entire tumour was in a state of slough ; a transverse burst or rupture had taken place in its right side, from which a good deal of blood had flowed during the night. The pulse was rapid, and she seemed low and weak to day. On the 11th day the canula and ligature were removed, and as much of the slough excised as could be conveniently reached. By cutting away a part of the slough from day to day the whole was removed before long, and the occasional use of the warm bath, with unremitting attention to cleanliness, subdued all the swelling and inflammation of the labia. A very minute examination, three weeks after the detachment of the ligature, could not detect any remaining portion of the growth. A slight incontinence of urine existed, but this became daily less troublesome, and in a few weeks altogether ceased. This woman was seen, some months after leaving the hospital, and she continued perfectly well, and without any return of her complaint.

[a] The woodcuts illustrating this report are from engravings by Mr. Oldham.

This growth was extremely firm and unyielding, so much so as to justify the opinion of its being of a dense sarcomatous or fibrous nature. After its vitality had been destroyed it appeared just like sloughing tendon, so strongly marked was its fibrous structure.

Fig. 6.



Case X.—*Fibrous Polypus of Vagina; Extirpation.* A tall, healthy young woman, aged 23, in the seventh month of her first pregnancy, suddenly felt something to prolapse from the vulva, whilst she was in the act of running. This caused her much pain and uneasiness, and compelled her to seek advice. A firm fleshy tumour, of a deep red colour, was found protruding beyond the ostium vaginæ, but attached to the posterior wall of this canal, and about midway up, by means of a flat pedicle. This tumour was considerably larger than a hen's egg, did not bleed when handled, and was not painful to the touch; and the patient affirmed that she had been wholly ignorant of its existence till the present time. Without much trouble it was returned into the vagina, and it slipped into the pouch or depression ordinarily existing in the posterior wall, but which, in this present instance, was much enlarged. This gave her much ease; but the tumour prolapsed again. Deeming it advisable that this polypus should be extirpated as soon as possible, in consideration of the woman's advanced state of pregnancy (for it might have seriously interfered with parturition), she was removed into one of the chronic wards of the Lying-in Hospital, when Dr. Shekleton (then Master of the hospital) applied a ligature to the pedicle.

On the fourth day there was a good deal of vaginal soreness, and some

fetid discharge. As only a small portion of the pedicle was uncut, this was divided with a scissors, and the tumour removed. She left the hospital some days afterwards perfectly well. At the full term of pregnancy she returned to the hospital in labour, which proceeded most favourably, and the woman made an excellent recovery.

This was a true polypus, and resembled, in its negative symptoms, the case last related—having given rise to no inconvenience whatsoever, except the mere local annoyance produced by its bulk and accidental displacement.

Case XI.—*Fibrous Polypus of Vagina; Ecrasement.* A woman, aged 24, in the last month of her second pregnancy, was received into one of the chronic wards of the hospital, on the 5th July, 1857, with a tumour at the vulva, and just beyond the vaginal orifice, the size of a small hen's egg, and of a deep livid colour. Dr. Geo. Montgomery, then an assistant in the hospital, examined her, and found this tumour to be connected by a stalk with the posterior wall of the vagina. Dr. M'C. did not see her for three days afterwards. The external tumour had then disappeared, but the growth was found lying in the upper and back part of the vagina; and with little difficulty, or pain to her, it was brought down into view. There was some fetid, bloody discharge, which did not come on till after her admission. The tumour was now considerably reduced in bulk, softened, and of a black colour; in fact it appeared partially dead and decomposed, from the constriction exercised upon it, when protruding, by the sphincter vagina. This tumour first appeared on the afternoon of the 4th (the day before her reception into the hospital) and till then she was wholly unconscious of the presence of anything of the kind.

Thinking it desirable that this sloughy mass should be got rid of as quickly as possible, her labour being so near, Dr. M'C. put her under chloroform, on the 9th, drew down the tumour, and safely excised what remained of it with the écraseur. In three days she was up, and the discharge had nearly ceased. She went home; but returned on the 16th, supposing that her labour had come on. True labour did not set in, however, till the 20th, when she was delivered of twins. From the time of delivery she began to sink, and expired in 34 hours afterwards. The cause of death was not very apparent; no peritonitis or traces of pus. The uterus, however, was very large, and its interior was dark coloured and very fetid—almost gangrenous. The only vestige of the polypus was a superficial ulceration, the size of a sixpenny, low down on the posterior wall of the vagina.

Case XII.—*Cystic Polypus of Vagina; Puncture.* A healthy woman, aged 23, was admitted, in labour of her second child, January 23, 1861. On examining her vaginam, an oblong body was found attached to the back

wall of the canal, within an inch or two of the os uteri. This tumour was fully an inch and a half long, rounded, and as thick as a man's index finger. It contained fluid, was connected by a small pedicle, and could be brought down partially beyond the vulva, so as to be rendered visible. The wall of the cyst was of a whitish colour, and evidently very thin. As it was plain this tumour could not interfere with parturition it was let alone for the present. Her labour was easy, and her recovery good. On her ninth day, and before leaving the hospital, Dr. M'C. examined her again, and found the tumour in the same state as before. On puncturing it with a sharp pointed bistoury some transparent gelatinous fluid escaped, and the cyst immediately collapsed. The puncture caused her some little pain. This tumour had given rise to no symptom, and the woman was wholly unaware of its presence till it was discovered by Dr. Halahan during her labour.

Of the four cases last related, three were of a well marked pediculated form, and grew from the posterior wall of the vagina. The growth of these tumours was imperceptible, and wholly unattended by any symptoms; and their presence was discovered by mere accident. In the other case the tumour had not a distinct pedicle or neck, but it possessed a strikingly fibrous character. Its seat was the anterior wall of the vagina, so low down as to approach the meatus urinarius. In fact the situation of this tumour was the same as that of the growth described by Sir C. M. Clarke, under the name of "thickening of the urethra," but it bore no other resemblance to it whatsoever.

Dr. John A. Byrne read the following case of *Rupture of the Uterus, in which recovery took place.*

M. A. Butler, aged 40, was admitted into No. 8 ward on the night of September 12, 1860, about 10 o'clock P.M., in labour of her fourth child. On making my nightly visit to the ward, at 11 P.M., I saw her, as well as the other patients who had been admitted since the evening visit, and I examined her. I found the os uteri soft and dilatable, not distended, the head presenting, the membranes had been ruptured for a few hours before admission, but she had scarcely any labour pains, and, in fact, she could not as yet be said to be in labour. The fetal heart was very distinctly heard in the pubic and right iliac regions and, to all appearances she was progressing very favourably.

At about 7 o'clock A.M., on the following morning, the nurse of the ward came to me, and requested that I might see her, being desired to do so by the gentleman on duty. I visited her accordingly, and, on making inquiries, I was told, that the pains had ceased for some time, and that she had just vomited something, which, on examination, appeared to be fluid which she had been drinking.

I now made a very careful examination, and found that the head had descended, but could not be said to be well in the pelvic cavity. The presenting part too, viz.: the anterior fontanelle, was felt behind the pubis, it was large, soft, and elastic to the touch, and the bones of the scalp were loosely separated. The head, in fact, presented in a well marked degree all the signs of hydrocephalus.

The pelvis seemed sufficiently roomy, there was no deformity, no tumour, the sacro-vertebral promontory was not very distinct, and evidently, the dystochia was the result of cephalic, not pelvic, disproportion.

There was a slight discharge of blood from the vagina, but not to any extent.

I next proceeded to examine for the sounds of the fetal heart. And after a most careful examination in which, subsequently, Dr. M'Clintock and Dr. Halahan took part, not the most remote trace of either it or the bruit placentaire could be detected, although a few hours before they had been heard very distinctly.

Her general condition was sufficiently alarming, her face had an exceedingly painful and anxious expression, her lips were pale and clammy, she moaned and complained of extreme pain over the whole abdominal region; and this pain was increased by every attempt made to examine the uterus; she cried out not to touch her upon any account, the abdomen was very tympanitic at the upper part, but no symptom of extravasation of the uterine contents existed. She also complained of a symptom which is not usually noticed in descriptions of this accident, but which I have remarked to have existed in some of the cases which I have seen, viz.: a spasmodic pain passing through the upper part of the sternum and back to the spine. Her pulse was small and thready; she had at first vomited all the contents of the stomach, and, subsequently, a dark coloured fluid; and, in addition, there was complete absence of uterine action.

On making inquiries, I ascertained that all her previous labours, three in number, had been easy. She had had three children at the full time, but had aborted, at the third month in her last pregnancy; her general health had been tolerably good, although she was much exposed to hardship, being obliged to attend to a small apple stand in the open street. She was a woman of middle size, had a hard withered look, but presented no appearance of any deformity.

Now, taking a most careful survey of all the symptoms which presented themselves, I came to the conclusion that the case before us was one of rupture of the uterus, and that immediate delivery should be effected. In this view Dr. M'Clintock, the master of the hospital, concurred. He, as I have mentioned already, and Dr. Halahan, made a most careful examination for the sounds of the fetal heart, but they could not be heard in any part of the abdomen.

I proceeded accordingly, assisted by them, to deliver her, by the opera-

tion of craniotomy. On the introduction of the scissors, about one half-pint of serum came from the cavity of the cranium: this having flowed out, the remainder of the delivery was accomplished rapidly. No blood flowed from the fetal skull, and the placenta was expelled immediately after the child, which was a male, of about the average size, very well developed, and not malformed, with the exception of the enlargement of the head.

Some brandy was administered, and two grains of solid opium, with one of capsicum, in a pill; and a sinapism placed over the epigastrium, and the opium was ordered to be repeated in grain doses every hour.

Sept. 13, 4 o'clock, P.M., $7\frac{1}{2}$ hours after delivery.—Vomiting still continues; some reaction has taken place; she complains of great pain over the uterus; eighteen leeches were ordered to be applied.

At $7\frac{1}{2}$ o'clock, P.M., 12 hours after operation.—Pulse 120, small; the opium pills were ordered to be stopped, and one half grain of calomel and one half grain of opium to be given every hour.

Sept. 14, 26 hours after delivery.—Pulse 120, small and hard; she was very uneasy during the night; the stomach had been very sick, and still continues to be so; she can bear pressure over the uterus better than yesterday; expression of face very anxious; ordered to continue pills; 12 leeches to the uterine region; a sinapism to the epigastrium; seltzer water to drink.

Evening.—Condition very much the same; the pills to be given every three hours.

Sept. 15, third day.—Pulse 98; slept a little during the night; uterus extremely tender; considerable tumefaction of the abdomen; sickness still continues; she was ordered muriate of morphia, calomel, capsicum, of each $\frac{1}{4}$ grain, in pill, every second hour; a sinapism to the epigastrium, and ice to be placed in the mouth.

Evening visit.—Pulse 104, small and hard; the bowels moved too often; she was ordered to omit the pills, and 1 scruple of mercurial ointment to be rubbed in, night and morning.

Sept. 16, fourth day.—Pulse 102; characters the same; did not sleep well; dozed occasionally; but on account of the bowels she was very uneasy during the night. She had had an anodyne enema, which, to some extent, relieved her. A large linseed poultice was ordered to the abdomen, and it to be smeared with mercurial ointment.

Evening visit.—Pulse 108; very feeble; there is great thirst; has distressing hiccough; she was ordered to have dilute hydrocyanic acid 2 minims; Batley's sedative liquor, 15 minims, three times during the night, and to have 3 ounces of wine, and the poultice and mercurial ointment to be continued.

Sept. 17, fifth day.—Pulse 94; slept a little during the night; complains of great thirst; vomiting somewhat relieved; still a great

deal of tenderness and hardness of abdomen; diarrhœa relieved; she was ordered to continue poultice and draughts; chicken broth.

Evening at 6½.—She had a rigor; pulse 96; to continue wine and draughts.

Sept. 18, sixth day.—Pulse 94; passed a restless night; vomiting still continues; abdomen tender; ordered a sinapism to the epigastrium; 15 grains of mercurial ointment at night and morning.

Evening.—Pulse 108; condition very distressing; vomiting during the day; very low; ordered brandy 3 ounces; a blister to abdomen; morphia ½ grain; and dried soda, 2 grains.

Sept. 19, seventh day.—Pulse 112; slept a little; vomiting somewhat relieved; mouth not affected yet; abdomen tumid and tympanitic; is very cheerful; thinks that she will recover; ordered mercurial ointment to the blistered surface; brandy 4 ounces; to continue pills; to have seltzer water; and to take 2 grains of sulphate of quinine in mixture 3 times in the day.

Sept. 20, 8th day.—Pulse 116; some sleep during the night; does not complain of much sickness to-day; mouth not touched: considerable abdominal tumefaction still; blister very sore and gives her great pain and annoyance.

Evening, at 6¾.—She had a rigor. Continue pills, and to have four ounces of brandy.

Sept. 21, 9th day.—Pulse 116; not much change; did not sleep much during the night; complains of very great weakness; ordered brandy, three ounces, and the mixture containing quinine.

Evening.—To have the same amount of brandy, and one half grain of morphia.

Sept. 22, 10th day.—Pulse 110; condition much the same; had some sleep; has distressing hiccough; ordered to continue the brandy; to have the morphia at night, and chicken broth.

Sept. 23, 11th day.—Pulse 108; is cheerful; her back is red and tender; dislikes the brandy; to have wine, four ounces, and the same complement of wine at night, and the morphia.

Sept. 24, 12th day.—Pulse 108, small; had some sleep; her tongue is sore from some ulcerations; *a purulent discharge observed coming from the vagina;* ordered to use gargles, wine, and nourishment; vagina to be syringed.

Sept. 25, 13th day.—The vaginal discharge very offensive; mouth very sore; considerable diarrhœa; continue wine, &c.; ordered—opium, one half grain; ipecacuanha, one half grain; nitrate of potash, four grains; three times a day.

Sept. 26, 14th day.—Pulse 104; mouth still very sore; ulcers to be touched with solution of nitrate of silver; continue medicines and wine, &c.

Sept. 28, 16th day.—Pulse falling, 92; she is improving gradually;

there is still, however, some diarrhœa, for which she was ordered suitable treatment; offensive vaginal discharge still continues.

Sept. 30, 18th day.—Pulse 92; progressing favourably; no symptoms indicating danger; surface of abdomen healing; the abdomen is soft, and not painful, with the exception of the lower part, where there is still some pain felt on pressure; the leech-bites, however, are very sore and painful; she sleeps, and is able to take nourishment; is very cheerful; she still, however, suffers from occasional diarrhœa, which continued at intervals, until

Oct. 4, 21st day, when she presented the following signs:—Her pulse was 92—of a better tone, however; she sleeps tolerably well; discharge from vagina not so offensive; diarrhœa greatly checked; some pain, on pressure still, over lower part of uterus; is exceedingly cheerful; has some appetite. She went on in this manner, with varying diarrhœa, controlled by medicines, until

Oct. 14, 31st day, when her pulse had fallen to 84; and the only annoying symptoms which remained were the ulcerated condition of the mouth and the diarrhœa, which gradually improved. She was allowed to sit up at the fire in her ward; her appetite began to return; and in fact she was pronounced out of danger; and on

Oct. 27—37 days after her admission—she left the hospital quite well, some weakness, however, still remaining.

On the day before her departure we examined the vagina and uterus with the speculum; and we observed what appeared like a ridge of granulations across and through the os uteri. It had the appearance, in fact, as if a portion of the right wall of the vagina had been united to the middle of the cervix uteri. On touching this ridge it bled freely, and pus exuded from the line of junction; and, on looking at this, we had not the slightest doubt upon our minds that we were looking upon the new structure which filled up the rent, and we were quite satisfied that it was in this situation that the rent or fissure had taken place.

In about three months afterwards I met this poor woman near my own residence, and she addressed me, and asked me did I remember her. I asked her to call upon me; which she accordingly did; and she then informed me, that since she left the hospital she had enjoyed very good health, with the exception of not having menstruated, until about three weeks before I saw her. Before the menstrual discharge she felt what she compared to a *beeling* in her side; and this was followed by the discharge of a thin bloody fluid, resembling, as she said, wine and water. This continued about the usual time of the menstrual flux, and then disappeared. She promised to return to me at some future time, to be examined, but she did not; so that I am unable to give any further history of her case at present.

I must apologise for having entered so fully into the details of this

case; but it happened to be one of those in which details as to treatment, progress, &c., are necessary. Such a case may happen at any moment to any of us engaged in practice; and the recital of the manner in which this patient was so unexpectedly affected by this complication of labour—then rallied from collapse seemingly fatal—then became affected with reactionary symptoms, which became so aggravated as to menace dissolution; but which, by means of the treatment employed, gradually yielded, and were finally subdued, and afforded to us the pleasing gratification of seeing a favourable termination to an accident which is most properly considered as one of the greatest calamities that can befall a parturient woman—will not, I hope, be deemed unimportant.

The objection might, possibly, be urged by some persons that the array of symptoms which I have given was not sufficiently clear to induce us to pronounce this positively a case of rupture of the uterus. We see that many of the symptoms of this accident, as laid down by authors, were absent; as for instance, hemorrhage—recession of the presenting part—the absence of any sensation, on the part of the patient herself, of the accident having occurred—the absence of any part of the body of the child in the abdominal cavity of the mother. Now, no doubt these symptoms were absent; and our diagnosis was founded upon the presence of the remaining symptoms—such as the extreme collapse—collapse which, I believe, is peculiarly indicative of this accident—upon the agonised look, which, to one accustomed to see cases of this kind, almost always prompts him to examine for the remaining symptoms which are pointed out by authors as pathognomonic of rupture—upon the abrupt cessation of the labour pains—but founded, above all, upon that symptom which is peculiarly indicative of it—particularly when combined with other signs—I mean the cessation of the fetal heart-sounds, a symptom which has been so strongly dwelt upon by Dr. M'Clintock in his paper upon this subject—and founded also upon the manifest fact of an existing disproportion between the head of the child and the osseous passages of the mother.

Now, taking all these circumstances into consideration, it will be admitted, I think, that our diagnosis of this case was correct, and that we were quite justified in regarding it as one of rupture or laceration of some part of the uterus; of what part it mattered little as to practice, as our treatment was at once indicated, and was quickly carried out.

As authors inform us we must not expect, in every case of rupture of the uterus, to meet the same identical symptoms. In some the majority of the signs will be present, and some few may be absent; and again, in other cases, the latter may be present, and the former may not; so that it is well that we should be prepared for this, and not hesitate about what is to be done, because we are not satisfied on account of the absence of one or more signs. The case is one which leaves no time for indecision, and our remedy must be prompt.

Notwithstanding all that has been written upon this subject, and all the statistics which have been given with regard to the comparative frequency of this accident in primiparæ and multiparæ, we generally find that it is an accident which occurs with greater frequency in those who have had children.

If we add to the 75 cases collected by Dr. Churchill those related by Drs. Sinclair, and Johnson, and Hardy, and M'Clintock, and this, the total is 102; and out of this number rupture of the uterus occurred in but 10 primiparæ, or in about one-tenth of the whole; and out of Dr. Trask's collection of 303, it occurred in but 24 primiparæ, or something more than one-twelfth of the whole. So that we observe that there is a very close approximation in the results arrived at by these observers.

The history of those cases tells us that no age is exempt from the occurrence of this accident—the young, the middle-aged, and those more advanced in years are all subject to it—but not equally so. Those about the middle age are most subject to it, according to the tables of Dr. Collins. Thus, out of 34 cases, 19 occurred between the ages of 29 and 37, exclusive of those two ages, in a range of years between 16 and 40. Now, excluding accidents, excessive uterine action, narrowing of the pelvis, or disproportion of any kind, we may, I think, with tolerable certainty, account for the greater frequency of it, at or about this period, by the change which the uterine tissue undergoes either by fatty degeneration or ramollissement—the *post mortem* examination generally revealing some such change in the part of the uterus where the laceration has taken place.

Although excessive uterine action may *per se* produce laceration of the uterus, yet, as this and many other cases recorded by authors exemplify, we see that rupture is very often found where there has been very little uterine action. How seldom do we find the uterus to rupture in primiparæ, where the action is strong, and where there are many obstacles to overcome; how often have we to introduce the hand to turn or remove the placenta without injury being done to the uterus; how often, too, in cases of disproportion we see the uterus acting powerfully and for a long time, and yet this accident does not occur; but in the case which I have related at no time was there strong uterine action, or at least what was sufficient to produce this injury, if, perhaps, she had not to the enlarged head of the fetus also had, superadded, a softened or thinned cervix uteri. These two causes combined, I have scarcely a doubt, were conducive to the occurrence of rupture in this case.

Hydrocephalus is generally laid down as one of the causes which may produce, or rather conduce to this accident; yet in neither of the reports which have lately emanated from the Rotundo Hospital is there a case in which it could be attributed to hydrocephalus; although Murphy, Lee, Collins, Ramsbotham, and others relate some cases, it is not at all im-

possible that the child in this case could have passed through the pelvis, it was not a case of enormous hydrocephalic enlargement; the fluid contained did not amount to one pint; the head was partly down in the pelvis; and, in my mind, there was scarcely a doubt that if the pelvis were sufficiently roomy—as we had no reason to suppose was not the case—and if the action of the uterus had been strong, and the tissues of the uterus healthy, the child might have passed through alive. We know that many cases are on record of children with larger heads than this having passed through a properly formed pelvis. Merriman mentions a case in which the circumference of a hydrocephalic head measured, after being born alive, 22 inches. Now in this case which I have detailed there was scarcely any uterine action at all; and the uterus, it is highly probable, gave way, perhaps, under the influence of a feeble pain, which, acting in conjunction with too large a head, and too soft a uterus, produced the laceration.

With regard to the recovery of patients from this accident, the tables on this head are not very encouraging; taking the number of cases recorded by Dr. Churchill, which amount to 80—and adding those related by Drs. Sinclair and Johnson, 17—this case 1; total, 98—we have only 11 recoveries, or a little less than 1 in 9.

Now this is confessedly a very small number of recoveries; but still the result is one that should lead us to have hope, and to trust in the recuperative powers of nature, even in such a formidable complication of labour as ruptured uterus. We know how to treat this accident better now than formerly. We know the beneficial effects of large doses of opium, and the advantages of the non-depleting method of treatment; and had we even on record no other case, as a proof of the efforts of nature to effect a cure, the wonderful case so ably recorded by Dr. Mackeever, in which, in addition to the rent in the uterus itself, there was also a sloughing of a considerable portion of the intestinal canal, and in which the patient survived, and afterwards became pregnant, would induce us to not despair of a successful termination to this formidable accident.

The occurrence of rigors on the fifth and eighth days, respectively, is matter well deserving our attention. We know that this is in general a symptom denoting the occurrence of pus formation; and it is scarcely presuming too much to attribute, in this case, the rigors to such a circumstance, particularly when we remember that they were succeeded by the escape of matter from the vagina, which continued for a considerable time; and the seat of this escape of matter was afterwards, on the recovery of the patient, manifested in a well-marked manner. If this were true, it is a beautiful illustration of the manner in which it may be supposed that nature effects a cure in such cases. Firstly, we had inflammation, peritonitis, effusion of fibrin, formation of a pus-secreting

surface, and the entire mass of the structures engaged well guarded by the fibrin poured out around them; and, in fact, the whole mass might be said to resemble the cyst of an abscess.

Dr. MacSwiney exhibited the uterus of an unmarried woman, aged 58, which had an oblong tumour, fully the size of the uterus itself, attached by a rather narrow, and very short pedicle to the fundus of the organ.

The patient, from whose body it had been taken, had recently died under Dr. MacS.'s care, in Jervis-street Hospital, from a very severe attack of acute desquamative nephritis, after an illness of only about fourteen days. When detailing the history of her illness, she said that she had enjoyed excellent health all through life—never having been in the least ill until seized with the malady under which she laboured when she came into hospital. She had never experienced any inconvenience or distress from the affection of the womb. It was first detected when the *post mortem* inspection of the body, with a view to ascertain the condition of the kidneys and other parts, was being performed. The uterus was of the normal size of the virgin organ, and healthy. The tumour, situated as above described, was about $2\frac{1}{2}$ inches long, $1\frac{1}{2}$ inch broad, and 1 inch thick. It was nodulated, and of a whitish-brown colour. It felt hard, and weighed heavy. Upon making a section into its interior the edge of the scalpel was turned upon a considerable amount of hard substance with which it came in contact, and which was very difficult to divide. In fact ossific degeneration had proceeded to a considerable extent in the structure within the tumour.

TRANSACTIONS OF THE COUNTY AND CITY OF CORK MEDICAL AND SURGICAL SOCIETY.[a]

(Continued from vol. xxxii. p. 222.*)*

SESSION 1861–1862.

Opening Meeting, October 9, 1861.

ANNUAL ADDRESS

By John Popham, A.M., M.B., Licentiate of the King and Queen's College of Physicians; Physician to the North Infirmary and Union Workhouse, &c., &c., President of the Society.

In seeking for a subject upon which I may address the members of the Cork Medical Society at their opening meeting, it occurred to me that a brief retrospect of its foundation and progress may not be unacceptable

[a] These Reports are supplied by Dr. W. P. Bernard, Secretary to the Society.

to our junior brethren. As I happen to be among the few original members now remaining—a list, comprising Drs. Harvey, Bullen, Finn, O'Connor, Tanner, Hobart, &c.—who "rocked the cradle of its infancy," I may, perhaps, be permitted to speak of it, in common with them, with feelings somewhat akin to parental partiality.

The Cork Medical Society owed its beginning to the medical staff of the city hospitals. The late inspector-general of the forces in Ireland, Sir James Pitcairn, consulting surgeon to the South Infirmary, always anxious to promote a spirit of harmony amongst the members of our profession, proposed to the medical officers of the infirmaries to meet month about at each others' houses; and after an innocent participation of the festive comforts, to terminate the evening in consulting together upon those difficult cases occurring to each other, which may require elucidation from united experience and skill. At one of those pleasant reunions—those "*noctes cœnæque deûm*"—it was resolved that we should extend more widely the advantages of our little medical conference, by changing its peripatetic character, and a plan, founded on the rules of the several metropolitan medical societies was thrown into form by Dr. Harvey, as secretary, and obtained favour with our local brethren. Since then, with some necessary modifications, it has passed through a long and honourable probation; and in looking back we have but one regret—that time has dealt hardly with us. The honoured names of Pitcairn, Bull, Howe, Lloyd, Haines, are still fresh in our memories, which testify both to our private sorrow and to the public loss which our profession, in this city, has sustained.

Before the institution of the medical society, our city and county, though always abounding with excellent practical physicians and surgeons, can scarcely be said to have contributed *largely* to medical literature. Some valuable publications and articles, by various Cork physicians, have appeared at intervals since the commencement of the present century; and we can refer back to the works of Dr. Joseph Rogers in 1734, upon the epidemics in our neighbourhood, and of Dr. Maurice O'Connell, in 1746, giving an account of the praxis of Cork, but no *continuous* effort took place till the selected papers of this society were published. In 1850 I had, as secretary for that year, the gratifying privilege of preparing our *first* Report for the *Dublin Quarterly Medical Journal*. Our little offering was received with favour, and since that time the proceedings of our society have taken their place, with filial respect, in that Journal, alongside the riper experience and maturer knowledge of its distinguished precursor, the Dublin Pathological Society.

> "Dextræ se parvus Iulus
> Implicuit, sequiturque patrem non passibus æquis."

What better example for its imitation could it desire?

It needs but little argument to show that it depends on learned societies themselves whether their transactions become of positive or negative value. Such societies, by an union of intellectual ability, and a division of labour, can effect what individuals must fail to accomplish; but they are subject to periodical fits of energy or depression. Indolence is a "taking" disorder, but, happily, emulation may become equally contagious. It is wonderful how much can be accomplished by a few energetic minds. Like iron sharpening iron, they make other minds keen. When unity of action can be reckoned on, all that is required to produce valuable results is to give it a proper direction. Let me give you an example how the efforts of many, directed towards a single object, have been remarkably successful. At the outbreak of the famine fever of 1847 and 1848, circulars were issued from the *Dublin Quarterly Medical Journal* to the practitioners throughout Ireland, requesting information upon a number of well-selected topics, respecting the nature and extent of the epidemic. "To this circular," we are told, "more than seventy answers were received, being, in some cases, extensive reports, and in others satisfactory replies of shorter extent." Now what were the results of this inquiry? The universality of this formidable epidemic was at once established, there being but one district in Ireland, namely, Rostrevor, in which it had not more or less prevailed. By the co-operation of so many trustworthy observers, a body of evidence has been collected upon this particular fever which has rendered its natural history one of the most complete in medical annals. Now, how could any single, unassisted physician, however accomplished, give an account so comprehensive as this? He could only view the disease within a circle of a narrow radius, and could speak but doubtingly upon the varying phases which it must have presented when the disturbing influences of differences of situation, climate, geological condition, diet, and other circumstances altering the type of disease, were brought to bear upon it. In order to form a fair opinion of the value of these reports, we have only to compare their fulness with the meagre descriptions of epidemics of fever previous to the present century.

I may quote another illustration to the same effect from the valuable papers of Drs. Stokes and Cusack, upon the mortality of Irish medical practitioners. We had, in the famine year, become painfully accustomed to the mournful iteration of the ill-boding words—"died of fever, caught in the discharge of his medical duties;" but we did not know the fact, until they discovered it by circulars sent to every corner of our island, that in the year 1847, one-fifteenth of the whole medical community was swept away, and that while the mortality from fever, compared with deaths from all causes, was as 1 in 10 for the whole population, it was as 1 in $2\frac{1}{4}$ for medical men in Ireland. The mortality of Irish practitioners was thus, by the efforts of individuals acting upon the whole

profession, proved far to exceed that of army surgeons, even amidst all the chances and privations of war.

I have brought before you these examples as worthy of imitation by ourselves. What is there to prevent this society, unless our *vis inertiæ*, from sending out circulars of inquiries when any suitable object for investigation occurs, and thus enlisting the experience and research of our county or provincial brethren? We must not rest content with recording cases of ephemeral interest, but strike out boldly in quest of matter of more general and durable utility. Why is the Académie de Médecine of Paris so trustfully consulted by the French government in all cases of public health? Is it not from the admirable reports which it issues on all disputed questions of disease and hygiene? Whenever a new operation in surgery is proposed, a new medicine is to be tested, a new sanitary scheme to be estimated, it appoints its commissions of inquiry. Too large a body for conjoint action, it divides and subdivides its members, telling off two, perhaps, for one question, three for another, and always selecting those members whose special acquirements enable them to probe the matter home, with science and skill. Why should not our society, abounding with well-educated energetic young men, and a sprinkling of grey-headed seniors, have, after such high examples, our committees to test the claims of the useful or fashionable medical theories of the day? There are now floating before the minds of the public many interesting subjects of social science; many suggestions about hospital reform and general therapeutics. If we do not take up these questions of ourselves for discussion, we must be driven to do so by the force of circumstances. Non-professional gentlemen, and what is more tantalizing, even non-professional ladies, are actually entering the lists against us, and are laying a kind of exclusive claim to the department of public health. They are converts to the doctrine of free-trade in physic, and there is this difference at least between us and them, that if we are wisely sceptical about the success of a project, they evince a happy dogmatism. If we sometimes judge without deciding, they decide often without judging; and hence we find a number of crude speculations fluttering about the public ears on questions which our profession is accustomed to pronounce upon with some diffidence. I am far, indeed, from condemning the well-intended exertions made by philanthropic ladies to reform our prisons and our workhouses, our factories and our schools. I would not interfere in the least with their inspection of the cook-house or laundry, or in the more important subject of industrial education, but they go beyond their province when, as in the late Social Science Meeting, they profess to prescribe for the sick. Why do I dwell upon these topics? It is to urge upon my medical brethren that the art of medicine is widening its circle, day by day, and that the public will not be satisfied unless its medical officers thoroughly understand the

great measures of sanitary improvement. And when such questions are taken up with zeal by well-educated physicians, qualified to pronounce upon them by a course of study, the most extensive of any of the learned professions, the opinions which they do pronounce shall be with a voice of authority which no community will be so adventurous as to think of resisting.

There is but one subject more upon which I wish to make a remark; as it is much misunderstood by the public, who think that our profession is a purely practical one, and that the study of books is vastly inferior to that of nature for learning medicine. I would reply to this fallacy by the words of the wisest observer of nature that ever lived; "If a man," says Bacon, "read little, he had need of much cunning to seem to know that he doth not. Crafty men contemn studies, simple men admire them, and wise men use them." They who profess to disregard study are either obtuse or hypocritical, too dull to see their own ignorance, or too cunning, as Bacon says, to let it be seen. What would each of us become if denied access to the sages of medicine, and confined within the narrow limits of our own genius? The chief improvements in medicine have come not from what are called self-educated men, but from men of philosophic minds, who have not merely read, but also digested. In one sense only is this opinion correct. The active duties of the practitioner lessen the time for study. With, however, all the drawbacks, whether self-imposed or from the tyranny of circumstances, I believe that it is true of the medical profession, that while it can point with honest pride to many of its most enlightened members who branched off into the flowery paths of natural and experimental science, it is, taken as a class, amongst the best informed in the community.

Case of Aneurism of the Descending Thoracic Aorta, complicated with Pericarditis and Pleuritic Effusion. By Dr. W. Peterson Bernard.

Michael Horgan, aged 22, unmarried, and of very intemperate habits, a labourer, was admitted into the Workhouse Hospital, under the care of Doctor William C. Townsend, on 9th October, 1860, suffering from violent palpitation, on the least exertion, and pain in the left side of chest.

His health he describes as excellent (being able, without fatigue, to follow his laborious occupation), up to two years ago, when he was attacked with intermittent fever, for which he was treated in this hospital from time to time. When last admitted, in May, 1860, he complained of weakness in the loins, and pain in left side. The chest was carefully examined, and no disease detected; the urine was also tested for albumen, but none was present. After a few days, during which he received treatment more dietetic than medical, at his own request he left the hospital, much relieved but not free from occasional pains. He now

went to the neighbourhood of Blarney, where he pursued, without inconvenience, his usual avocations. His nearness to the Turkish baths. and free access to them, induced him to make use of them, (entirely on his own responsibility and without medical advice), no less frequently than 72 times in ten weeks, frequently, during the first fortnight, luxuriating in two, daily. During the use of the baths (and he was firmly persuaded that consequent on their use) the palpitation became more persistent and distressing, followed in a few weeks by the *fixed pain* in the chest, from which, up to the time of his death, he was never entirely free, the lumbar pain attacking him *occasionally* as before.

State on admission, 9th October, 1860.—Body wasted, appearance anemic, with a bilious tinge, countenance expressive of anxiety, tongue clean, secretions normal, eats and sleeps badly; decubitus entirely on left side; pulse in the recumbent position, right wrist, 92 and regular; no pulse felt in left wrist, but about the middle third of the forearm it becomes perceptible, beating at 96 and regular. The heart's impulse is very excessive, the heaving of the chest being perceptible when standing some distance from the bed; area of cardiac dulness much increased; respiratory sounds clear, and no appearance of dyspnœa. He complains of pain in left side of chest, hardly noticeable while he is still, but becoming distressing on very little exertion.

To have of the tincture of muriate of iron, and tincture of digitalis, 10 minims three times a day, his diet to consist of bread, meat, and one pint of porter.

October 13th.—About midday yesterday, whilst walking about the ward, felt the pain suddenly and completely leave the chest and attack, with severity, the loins, resuming its former position in about an hour.

14th.—Slept but little last night, because of the palpitation and pain in the cardiac region; distinct murmur heard with first sound of the heart when he assumes the erect position, much less distinct when recumbent. Heart's impulse perceptibly increased since last report. Omit the tincture of iron, and continue the tincture of digitalis.

15th.—Had a good night, and looks more cheerful; palpitation and pain much less; murmur scarcely perceptible in any position; pulse in right wrist, 84, regular and firm.

16th.—Slept well, and is almost free from pain, but cannot lie on the right side even for a few minutes.

17th.—Had a tolerably easy night, decubitus same as at last report; pulse 93, regular; pain in precordial region entirely disappeared; cardiac murmur with first sound very indistinct in recumbent position, disappearing entirely when placed in a sitting posture, impulse very strong. Continue tincture of digitalis, and the diet as before.

18th.—Feels much better than for several weeks past, and can now lie on either side without the slightest inconvenience; complains of the

weakness of the loins, occasionally amounting to an aching pain; cardiac murmur very distinct and rough when examined in the erect position; not quite so distinct when recumbent. Continue tincture of digitalis, increasing each dose from 10 to 15 minims.

20th.—Heart's impulse enormously increased since last report; feels palpitation more to mesial line; relishes his food, secretions fairly carried on.

22nd.—Had a good night's rest, looks and feels better.

24th.—Complains of the palpitation, which prevented his getting much sleep last night; his spirits are, in consequence, very depressed; pulse 96, and regular; impulse and murmur, both as aggravated as when last reported. Continue digitalis, and to have a desert spoonful of cod liver oil three times in the day, with the hope of checking the excessive wasting which is going on.

26th.—Cannot lie on the left side, but had a good night, and is more hopeful; jugular pulsation very distinct.

30th.—Pulse, 84, feeble but regular; palpitation less distressing; cardiac murmur not so distinct; jugular pulsation more evident than at last report. Continue cod liver oil and tincture of digitalis, the latter to be reduced to 10 minims each dose.

November 6th.—seems stronger and improved in every respect.

A few days after last report, he was transferred to the South Infirmary, being still under Dr. Townsend's care, and with the same line of treatment continued. There he remained for about three weeks, and then, feeling so much better, he went into the country, and was not again under observation until September, 1861, when he was readmitted into the Union Hospital.

1861, September 26th.—He states that during the many months he was out of hospital, he was able to earn a livelihood by labouring work, chiefly of a light character, such as whitewashing, &c.; the pain in the loins was not at any time very severe, though seldom entirely absent. The palpitation had of late become very distressing, and after mounting a high ladder, he had frequently, when he descended, to throw himself on his face and hands for a few moments to relieve the palpitation and attendant pain in the chest; his appetite began to fail, and his strength so perceptibly declined, that he was reluctantly compelled to give up a life of freedom for the comparative restraint of an hospital.

His habits of late were temperate, rarely exceeding a pint or two of porter in the day. His appearance is now very anemic, and muscles greatly wasted, tongue clean, bowels acting fairly; urine scanty and high coloured, no albumen; appetite very bad and stomach irritable; complains much of palpitation, and soreness over left side of chest, which is found, on percussion, to be extensively dull, occupying not only the cardiac region, but also the base of the left lung; the sounds of the

heart are distinct but feeble, with marked *bruit;* jugular veins of both sides are very much distended, no pulsation at either wrist; there is no dyspnœa, for the past three or four weeks he can only lie on his back or right side.

A mustard sinapism to be applied over the chest. His diet to consist of beef-tea, wine and soda-water.

September 27th.—Had a bad night owing to the "heaving of the chest," (the pain was very much relieved by the sinapism); has suffered for the first time from slight dyspnœa; pulse at the wrist 100, and extremely feeble; the chest was not carefully examined, as the attempt seemed to give him pain.

The sinapism to be repeated night and morning, and his nourishment continued; to have, at his own request, two eggs at breakfast hour.

28th.—Had an uneasy night, the respiration again free from embarrassment; left side of chest prominent, evidently from increased effusion; impulse of heart feeble and entirely to right side, the apex beating inferiorly and posteriorly to right nipple, no murmur perceptible; the lumbar pain has become more aggravated, but is now entirely referred to right lumbar region.

Mustard stupes to be applied to the loins, and his wine and beef-tea continued.

30th.—Sinking rapidly; increasing dulness, and absence of respiration over entire of anterior and lateral portion of left lung, save at the extreme portion of apex, where the respiration is puerile; posteriorly it is clear on percussion, and the respiratory sounds normal.

October 1st.—Had a good night; is quite free from pain and dyspnœa, and seems rallied.

3rd.—Lumbar pains again last night, but this time complained of all over the back, and not confined to any one spot.

Mustard stupes to be applied to back and loins, and his nourishment continued.

4th.—Pain much relieved by the stuping, but he is extremely feeble; no pulse to be felt in either wrist, nor in the temporal arteries.

7th.—Still weaker than last report; is again suffering slightly from dyspnœa; extremities cold, the hot jars are constantly applied; no trace of anasarca; tip of nose quite black; appears as if gangrene were setting in; he is free from pain.

8th.—Rapidly sinking; decubitus entirely on right side; black appearance of nose spreading considerably (involving fully a third); is now undoubtedly gangrenous.

10th.—Died this morning; was free from suffering at the close, and his intellect clear.

Post Mortem Examination.—When dividing the costal cartilages at left side, serous fluid was found to well out, and on raising the sternum, the

left side of the thorax was found to contain a considerable quantity of serum; the lung at the same side was collapsed, and lay against the posterior wall of the thorax, where there were some slight pleuritic adhesions; the pericardium was found very much distended, extending into the right side of the thorax; an opening was made accidentally into the pericardium, through which the contained fluid escaped, (the fluid contained in the pleural cavity and pericardium, was found to measure over four pints); the heart and the cardiac surface of the pericardium, were both coated over with a thick deposit of lymph, which presented a peculiar granular appearance, both were highly congested; the mitral valves had a slight deposit of lymph on their surfaces; the other valves appeared healthy; the left side of the heart was considerably thickened, though the organ, as a whole, was but little increased in size; the right lung was everywhere adherent to the costal pleura, the strength of the adhesions, particularly posteriorly and inferiorly, making its removal a matter of much difficulty.

On examining the thoracic viscera, a tumour, as large as a goose egg, was found in the lower part of the posterior mediastinum, its inferior edge reaching as low as the diaphragm; this, on examination, proved to be an aneurism of the descending thoracic aorta, though undetected during life; the most careful effort to remove the sack complete was unsuccessful in consequence of its firm adhesion to the vertebræ. On cutting into it, five of the vertebræ were found very much eroded, appearing to constitute the posterior wall of the aneurismal sac; a quantity of coagulated blood was evacuated, and a large mass of fibrin removed. The liver was found enlarged, and of the nutmeg character.

Remarks.—There is one subject in connexion with the foregoing case which, I think, calls for a few observations. I refer to the strong evidence, and very marked symptoms, of *cardiac disease* that existed during life; the remarkably augmented impulse, more than once alluded to; the increased extent of dulness, on percussion, in the cardiac region; and the well-marked bruit heard over the heart, (all which symptoms became more marked as the case advanced), would, I conceive, have left no doubt on the mind of any Physician that there existed hypertrophy and valvular disease of that organ.

The situation of the aneurismal tumour, however, seems capable, in a great measure, of explaining the cause of these symptoms, for, being placed directly behind the heart, it would tilt that organ forward at each pulsation; and this distension, being synchronous with the heart's action, would cause an increased impulse.

The increase of dulness may be explained by supposing the heart to be pushed forward by the tumour into closer contact with the parietes of the chest, and so displacing, to some extent, the overlapping lung; the bruit must, I conceive, have been conveyed through the heart from the

tumour, as the comparatively healthy condition of the valve renders it extremely improbable that it could have originated in the heart itself.

One other point also demands a word or two. The patient himself attributed the aggravation of his illness to the use of the Turkish bath; and, under the supposition that the case was one of heart disease, this did not seem improbable. During a recent debate in this Society, it was argued that the Turkish bath, by carrying off a large quantity of the watery portions of the blood, rendered it proportionably richer in fibrin; and that on this account it might increase any tendency to the deposit of lymph on the valves, so that the bath was considered dangerous for any person labouring under cardiac disease; and this case had been so frequently spoken of as an illustration of the above theory, that I think it only fair now to inquire whether the bath could have aggravated the disease? and this, in a case of aneurism is, I conceive, not probable; for if the bath be dangerous in cardiac disease, by increasing the tendency to fibrinous deposit, this very tendency (if produced) would be a most desirable object in cases of aneurism; for it is clearly by the formation of concentric layers of fibrin nature endeavours to strengthen the walls of the aneurismal tumour, and even occasionally effects a spontaneous cure. And surely anything that would increase this tendency, ought to be more calculated to assist nature in effecting a cure, than a cause of aggravating existing disease.

True Thoracic Aneurism; Hypertrophy of Heart; Disease of the Aortic Valves; Albuminuria and Atrophy of both Kidneys; Cirrhosis of Liver, &c., &c. Dr. Finn exhibited Pathological specimens of the above, and communicated the history of the case.

Thomas Cahill, aged 53, a jingle-driver, unmarried, was admitted into the North Infirmary on the 14th December, 1860, labouring under bronchitis and anasarca; the former having commenced about two months previous, whilst the anasarca dated from a later period. His habits have been irregular and intemperate, and he has been under treatment at various times within the last 14 years for syphilis, pain of chest, acute rheumatism, bronchitis, &c. He has frequently fallen, whilst intoxicated, from the seat of his car, and on one occasion expectorated blood immediately afterwards. Has suffered from hip-joint disease from an early period of life, and, in consequence, one leg is much shorter than the other.

General signs.—Face pale and œdematous; harassing cough, with copious muco-purulent expectoration; dyspnœa; pains referred to various parts of the body; tongue coated; appetite impaired; pulse wiry and accelerated, the artery, when pressed, communicating to the finger a sensation similar to that produced by contact with a calcified substance;

the urine, on the application of the usual tests, yielded a copious precipitate of albumen.

Physical signs.—Visible pulsation of the arteries of the neck; slight prominence of upper-third of sternum at right side; area of cardiac dulness enlarged; dull resonance also perceptible in the course of the ascending aorta and arch; bronchial rales audible throughout the chest; bruit de soufflet heard over the region of heart; and in the course of the ascending aorta and arch, over which latter parts the character of the murmur was much louder. Having remained in hospital for five weeks, he was relieved to such an extent as to be able to resume, for some time, his ordinary occupation. He was re-admitted on the 1st March, 1861, in about the same condition as on the former occasion. The countenance, however, presented in a more marked manner, the *anemic* character so generally observed in connexion with albuminuria. There now existed also marked turgescence of the veins of the neck. On the 19th March, the anasarca had entirely disappeared, and the pulmonary symptoms were also relieved, with the exception of occasional inconvenience from the cough in the morning. He sometimes complained of dysphagia, but did not always refer the difficulty, experienced in this respect, to the same point. In the course of the month of May he suffered from a violent attack of hematuria, which, for several days, resisted the usual treatment, and reduced him to the last state of weakness.

During the months of May and June, the symptoms generally assumed a more aggravated character; hemoptysis occasionally presented itself, and he frequently complained of acute pain, referred to the region of the heart. He died on the 11th July.

Autopsy.—Engorgement of the lungs, and effusion in the cavities of the pleuræ. Recent pericarditis; adhesion of heart to the pericardium; the connecting medium being composed of soft plastic lymph, which offered little resistance to the separation of the opposed surfaces. The heart was large, globular in form, and firm in its texture; it weighed 15 ounces. The left ventricle was hypertrophied in a high degree. The aortic valves were opaque, corrugated, and thickened, and presented vegetations at several points. The aorta itself was enlarged and sacculated to near the termination of the arch; it contained, throughout that extent, a coagulum of moderate size, which was partially decolorized. The interior of the vessel was thrown into folds, the middle coat having lost its elasticity; the internal lining membrane was pale, except at the distal point of the sacculated portion, where there existed considerable congestion; at this point, also, the limit of disease was defined by a narrow border of atheromatous deposit.

Cirrhosis of the liver, with diminution of its size, and the usual change of form incident to this disease. The larger of the kidneys weighed 3 ounces and 1 drachm; the other 13 drachms. Both kidneys were

pale, and almost wholly free from any superficial irregularity; but a section of either presented the characteristic pathological appearances usually observed in connexion with albuminuria.

Remarks.—The hematuria, which has been already noticed, would appear to have arrested the aneurism in its progress towards the usual termination of this form of disease; and to the same cause, perhaps, if not to the predominance of the white corpuscles in the blood, may be referred the absence of congestion in the interior of the vessel, a condition which contrasts with that habitually observed under similar circumstances. It is difficult to determine the order of sequence which the pathological phenomena observed, with the exception of the pericarditis, which obviously completed the circle of organic change. The co-existence of cardiac with renal disease, in a little more than half of one hundred cases recorded by Dr. Bright, would almost warrant a generalization on this subject. This complication, however, may be regarded as the exceptional case in this locality. Professors Harvey and O'Connor, of this city, who have had opportunities on a large scale of observing albuminuria in hospital and private practice, state that they have rarely seen this disease complicated with heart affection. Professor Osborne, of Dublin, referring to the co-existence of cardiac with renal disease, observes—"This last connexion has been placed in rather a prominent point of view by Dr. Bright. In my cases the two diseases appeared to be combined, only by both being the result of one cause." On the other hand Professor O'Leary, of Queen's College, has seen, at Vienna, the two diseases just referred to combined in the same degree of frequency as in Dr. Bright's practice. Mere meteorological differences would fail to reconcile results of experience so complicating as those adverted to.

A short Biographical Notice of Henry Pierrepoint, Marquis of Dorchester, some time Fellow of the Royal College of Physicians, London. By T. W. Belcher, M.A, and M.B., *Oxon. and Dublin;* L.K. & Q.C.P. Ireland, and Physician Extraordinary to the Cork Fever Hospital.

Perhaps in no country does the professor of medicine receive so few state honours as in ours: while lawn sleeves, in many instances, clothe the industrious and zealous divine, and the judicial ermine enables the once hard working lawyer "to live at home at ease"—like those comfortable specimens of mortality "the gentlemen of England"—the earnest and learned physician can hope for no further success than to acquire an enormous practice, which, even when made, is ever uncertain; and the very pursuit of it so wears out mind and matter, that of most, it can be justly said, "the weary wheels of life stand still at last." Hence the profession of medicine is very rarely pursued either for love of it or for gain, by the wealthy, and, in our day, never by the nobles. In a late

number of *Notes and Queries*, under the head of "Noble Physicians," appeared a few lines relating to the nobleman above-mentioned. This led me to inquire further into the matter, and, by the kind assistance of my learned friend, Mr. Richard Caulfield—who consulted various works for me in the Library of the British Museum—I am able to lay before you this short sketch.

Henry Pierrepoint, Earl of Kingston, was born in 1606, and was educated at Emmanuel College, Cambridge, where, in due course, he graduated. From early habit he was a studious man, reading for ten or twelve hours daily for many years; and although he appeared but little in the character of an author, yet he seems to have had a great foundation for being so.

Collins, in his *Peerage*, speaks of him as a learned man; and Walpole in his work, *Royal and Noble Authors*, (by Park, iii. 229), quotes Collins at some length to the same effect.

The following publications of his are still extant, viz.: 1.—"A Speech spoken in the House of Lords, concerning the right of Bishops to sit in Parliament, May 21, 1641." 2.—"Concerning the lawfulness and conveniency of their, (the Bishops), intermeddling in temporal affairs, May 24, 1641." 3,—"Speech to the Trained Bands of Nottinghamshire, at Newark, July 13, 1641"; and 4.—"Letter to John Lord Roos, (his son-in-law), February, 25, 1659."

He was called "the good Earl of Kingston," and was well read in the fathers, schoolmen, casuists, civil and common law, medicine, and anatomy.

For his proficiency in civil and common law he was admitted a Bencher of Gray's Inn; and, for his learning in medicine and anatomy, he was elected a Fellow of the Royal College of Physicians of London.

To the latter society he seems to have been more particularly attached; for he left to it his library of civil law books, the catalogue of which has been published:—"*Bibliothecæ Collegii Regalis Medicorum Londinensis Catalogus*," with an appendix, 8vo, 1757.

Antony Wood calls him "the pride and glory of the college," and Dr. Munk in his learned book, "*The Roll of the Royal College of Physicians of London*," (i. 262—274), lately published, gives an interresting notice of this distinguished nobleman. Wood also notes an elegy, (now lost), on him, by "John Crouch, sometime his domestic servant."

Throughout the great rebellion he was a steady adherent of King Charles I., and attended him at his garrison at Oxford. For his services the king created him Marquis of Dorchester in 1645. He survived the usurpation, and died at his house in Charleshouse Yard, London, December, 8, 1680, *ætat suæ* 74.

If we consider the immense benefits a man of this rank has it in his power to confer on the poor and suffering on his estates, it is wonderful

so few noblemen practice medicine with an enlightened and liberal spirit. Kings have learned mechanical trades, and statesmen have amused themselves with children's games; but few have played the physician.

Occlusion of the Vagina, rendering Penetration impossible, but not obstructing Impregnation and Child-bearing. By John H. Houghton, M.R.C.S. Eng., &c., Surgeon to the Dudley Dispensary.

The perusal of Mr. Chance's interesting paper on "The Total Destruction of the Penis not a Cause of Impotence,"[a] has induced me to send the following record as a kind of corollary to Mr. C.'s case:—

Whatever doubt may arise in the mind in reference to the veracity of the statements made to Mr. Chance, and consequently of the truth of the position he maintains, that destruction of the penis rendering penetration impossible, is not a positive obstruction to impregnation, there can be none in my case of the fact that occlusion of the vagina rendering penetration beyond all question impossible, is not an absolute obstacle to impregnation and child-bearing.

In reference to the point at issue, my case very much resembles the two cases quoted by Mr. Chance. It has, however, much interest in an obstetric point of view, on which I offer no remark now. I publish it simply in reference to the subject of Mr. C.'s paper, transcribing my notes without further comment.

Mrs. A., aged 25, one of the finest grown young women I ever saw, came under my care at the dispensary in the early part of 1858, on account of a train of symptoms clearly indicating something wrong in the genital organs. She had been under the care of several medical men previously, but they had not directed attention to these organs. After a little palliative treatment, I proposed an examination, which was readily assented to. On separating the labia I was surprised to find the progress of my finger arrested by a dense membrane, and on passing it backwards towards the anus, I could not find any opening into the vagina, but on passing it forwards towards the urethra, I discovered, close under the arch of the pubes, a small orifice, with the most firm and rigid edges posteriorly, and through this orifice I found it quite impossible to pass the tip of my first finger, which is very small. In fact, the vagina (with this exception) was completely closed by a dense cicatrix situated at its orifice, so that the finger could not, at the most, be passed more than an inch between the labia, so completely was the passage closed.

[a] Vol. xxxii., p. 39.

On inquiry, I found that she had had one child before, and had been attended by a midwife, who had allowed the head to remain "*half born*" for more than twelve hours. She slowly recovered, suffering great pain, and having a profuse discharge from the vagina. She did not consult any medical man, being satisfied with the assurance of the midwife that all was right.

When she got about, she found that the functions of the parts could not be performed as before. She went on for some time, hoping things would get right, but at length consulted some medical men, who gave her no idea of the nature of her complaint, nor did they propose any examination.

I gave her some medicines, calculated to improve her general health, which was much impaired, and also to gain time to think over the case, and to decide upon what was best to be done, when, one day, she came to the Dispensary, and told me she thought she was pregnant—and this suspicion soon proved to be true. I now determined to wait till labour came on—see what nature would do—and then deal with her condition as circumstances arose. Labour commenced on the 29th of September, 1858, at 9 P.M., and I saw her on the following morning at 11. The pains had then been sharp for some time—so sharp, in fact, that before I could get there (two miles distant), a midwife and Mr. Meredith (who lived near) had been summoned. On examining, I found the stricture sufficiently dilated to allow me to pass my first finger, as far as the second joint, with which I could feel the posterior fontenelle through the os uteri, which was dilated to the size of a five shilling piece; the membranes were ruptured; the pains were regular, and tolerably strong. I left her for a time, Mr. Meredith kindly offering to see her frequently, and send for me if anything happened. I saw her again at 10 P.M. The pains had continued; countenance good; skin cool; urine passed freely; pulse 96, full and soft and regular; tongue clean and moist; no thirst; bowels opened; head lower down, pressing on the cicatrix; the orifice admitted the finger freely. I remained with her an hour, and during that time dilated the orifice so far, that I could readily pass three fingers through it, though the margin was thick and very rigid then. I again left her, Mr. M. promising to keep his eye on her and send for me if necessary.

At 2 A.M., the pains had become so strong and the anxiety of the patient and her friends so great, that Mr. M. sent for me. I was, however, engaged at another labour, and did not arrive till 5 A.M. There was very little increase in the dilatation of the cicatrix, if any; though she had had hours of violent pain, with the head pressing firmly on it, and part of the scalp protruding through the orifice; countenance good; skin cool; pulse 96, regular, soft; urine passed; tongue moist; not much thirst; bowels opened by oil which I ordered last night; she

was very cheerful, and bore her pains admirably; the cicatrix very rigid. At 6·30 A.M., as no progress had been made for some hours, and the cicatrix remained as rigid as ever, I made two small incisions through it, one in the direction of each sacro-iliac synchondrosis. The pains continued, but not so strong or frequent; dilatation, however, went on, and the head descended. At 9 A.M. I found the progress still obstructed by a very firm band of cicatrix on the right side, which had not been sufficiently divided. This I again incised pretty freely where it seemed to offer the greatest resistance. No bleeding of any consequence followed the use of the knife, and the operation *did not cause any pain at all.* The dilatation now went on well, and the cicatrix did not offer any further obstruction of importance to the descent of the head. At 11 A.M. the head had made but small further progress, the pains were becoming less strong and less frequent, and the patient had become very anxious for delivery to be accomplished. Pulse 120; considerable feverishness. The head also seemed firmly fixed in the pelvis. Considering these circumstances, and the history of her former labour, I now determined to deliver by the forceps.

I commenced the operation at 11·10 A.M., and applied the blades without any difficulty. The head, which was found to be rather firmly fixed, was soon released, after which I almost allowed nature to complete the delivery, which took place at 11·45. Whilst I was attending to the child, which was born asphyxiated, Mr. Meredith removed the placenta. The uterus, however, contracted badly, and violent flooding came on. Pressure soon contracted the uterus, but it was not firm, and not near so small as it should be, and, as the flooding continued, I introduced my hand and removed some firm coagula and a small piece of the placenta which had been left. The uterus was still disposed to relax, and the flooding to recur, and, in fact, did return sharply. Grasping with the hand and the cold douche to the vulva and the hypogastrium, brought on firm contraction of the uterus, which was maintained by pressure and the bandage, and no further flooding took place. Two grains of opium were now given, and in an hour I left her composed, cheerful, and disposed to sleep, pulse 120. The child was resuscitated by half an hour's application of the "ready method," after the warm bath, artificial respiration, and cold sprinkling had failed to produce any decided effect. It is now alive. Details of her progress are unnecessary, and would be tedious; suffice it to say, that she made a good recovery. But all my efforts to prevent a further contraction were abortive to this extent, that when I last examined her, I could only pass two fingers through the orifice, as far as the second joints. She was perfectly restored to health. She miscarried since that labour; and, on 22nd November, 1861, was again confined at the full period. The orifice of the cicatrix admitted four fingers; but required slight incisions to be made into it to permit the head to pass.

Case of Reducible Inguinal Hernia—Radical Cure performed according to Wood's method. By W. COLLES, F.R.C.S.I., one of the Surgeons to Steevens's Hospital.

Patrick M., aged 28, admitted into No. 1 ward the 27th November, 1860. For about two years he has been labouring under an inguinal hernia of the right side; it has become very large, and he finds great difficulty in retaining it in the abdomen; he has tried several kinds of trusses, but in vain, and as he can not follow his laborious occupation, (farm labourer), he is anxious to have something done for it; he would run any risk to avoid being thrown out of employment.

The hernia was large, easily reduced, the ring and canal both much dilated. Having just then studied the plan proposed by Dr. Wood in the *Medico Chirurgical Transactions* for the relief of this infirmity, I resolved, with the consent of my colleagues, to try it.

The man was placed under the influence of chloroform, I then made an incision into the scrotum and loosened the integuments around, I passed the index finger of the right hand into the ring, carrying on it the inverted sac, till I felt the border of the transversalis muscle. With the left hand I passed a very curved needle armed with a strong hempen cord to that point, and while an assistant drew the integuments up I pushed the needle through all the parts. Leaving the loop, I withdrew the needle on one end of the ligature, which I passed through the outer wall of the canal, and then passed the remaining one through Poupart's ligament. I could not pass all through the same opening, as recommended. I was obliged to have two openings in the integuments, about the eighth of an inch apart. I then crossed the ligatures and tied them across a piece of wood. For three days after the operation he suffered considerable feverish disturbance, and pain in the region of the wound, but as the pain did not extend entirely over the abdomen, and as his bowels continued to act, I judged general peritonitis had not set in. I therefore allowed the ligatures to remain fixed for eight days. On loosening them and removing the piece of wood there came away a considerable discharge of rather fetid pus. In two days more I removed the ligatures, and found I had to use considerable force in removing the outer one. The abscess continued discharging for a week, then gradually closed, and all bad symptoms disappeared. When the swelling had subsided he was provided with a truss and allowed to return home.

November, 1861.—He has now applied at the hospital, one year after the operation. He has been wearing the truss ever since, till about three weeks ago, when the spring broke. He now applies for a new one. He says he never feels any inconvenience, or saw the slightest appearance of the rupture, but he would not like to go without the truss.

The above case I consider as a case of cure; although the man fears

to go without the truss, still the hernia has not made the slightest protrusion since the operation, and for some weeks he might as well have had no truss as the one he has at present. How far the operation may be justifiable requires further experience.

On Aphonia in Tuberculosis of the Lung. By PROFESSOR MANDL.

In opposition to the ruling and apparently well-founded opinion, that the alteration of the voice occurring in the course of tuberculosis of the lungs, is due to a local disturbance (catarrh, tuberculosis of the larynx) Mandl puts forward another view. He says these changes are not always the cause of the anomalies in the formation of the voice, which may rather be looked upon as functional disturbances of the recurrent nerve. Division of the recurrent nerve in animals gives rise to aphonia, difficulty of breathing, and closing of the glottis, so Mandl considers that the aphonia in the course of tuberculosis is caused by the infiltrated upper portion of the lung and the bronchial glands pressing upon the nerve. This aphonia accompanies tuberculosis of the left side seldomer than of the right. The recurrent nerve of the left side, passing between the trachea and œsophagus, is more protected from pressure than on the right side. In children, before the fourth year, the alteration in the voice is very rare, not frequent before puberty, and more rare in women than in men. The first of these facts Mandl tries to unite with the statement of Lanzet—that in young animals the section of the recurrent nerve is not followed by aphonia; the rare occurrence in females is explained by the larynx being more like that of a child than that of a grown man. After section of the recurrent nerve, or compression of it, fatty degeneration and atrophy of the internal muscles of the larynx set in, this Mandl ascertained on the dead body. By laryngoscopic inspection on the living, paleness of the mucous membrane, and limited mobility of the right vocal chord were observed. (*Jahrbuch*, 1861, p. 90).

In Memoriam!

1858, 1859, 1860, 1861.

In Memoriam! But the last tribute of the noisy living, to the dead great ones gone from among us across the vast and unknown sea! But a short requiem murmured o'er the grave ere the fierce din of life deadens the mournful chaunt! But a few flowers, sprinkled by the hands of fellow-workers, ere comes the rush of men and of events to trample them down into the yet fresh earth. In Memoriam! Though now a present and a national grief cries for a hearing, as Death is reaping near the throne. In Memoriam of our best and greatest; though the tracings of memory be dimmed by the tears of a country's loss, and all that is simple-minded and of generous heart subdues its private grief in sympathy with royal woe!

Saddening and solemn though it be to hear read out the muster-roll of Death, there is a pride in the names of these dead ones that robs our grief of half its bitterness. Nor is this chequered sorrow the sole and simple feeling that guides the recording pen in its attempt to trace the lives of such worthies, and point the moral they bequeath. The epitaph on the tombstone is not so much a tribute to the dead as a reproach to the living. It is present penance for forgetfulness that must come—for the oblivion, which as the golden sands drop from the glass of time, will most certainly submerge those who have established the strongest claims on the world's regard.

Is it the fault or solace of our nature that memory clings at best but feebly to the image of those with whom living we were most familiar, whose company we loved, whose thoughts were springs of our own actions, and whose language coined the issue of our minds? Is this a reproach to nature, and should we from it read the lesson that noble deeds and lofty lives are profitless and vain; or is such a reflection pregnant with a nobler and a higher import—a steadfast hope in other than man—the trust in a remembrance of good works recorded in a higher sphere? Were it not for this secret and this constant faith, whence could spring the ceaseless energy and steadfast purpose with which the disciples of our art struggle with disease, often against treachery from within and discouragement from without, knowing their efforts must at best be tentative, will mostly be met by ingratitude, and, frequently unseen, will of necessity be without reward. Who, disen-

chanted by such knowledge, by such knowledge as Time alone supplies, dispelling at last and for ever, the fairest and purest of youth's bright visions, would seek todev ote his life to medicine, if it were not for this trust, and the splendid examples of the working in that trust that Death now places before him? For his science, could he foresee it, must, though success wait on his steps, minister, most probably, more to the vices than the misfortunes of men. His life, so devoted, must be one of constant trial. Deficient in energy he must fall by the way; nor are there any of those convenient havens on the road that offer themselves to the weak of the sister-callings. Without ability his labour is but labour in vain, for no field so peremptorily requires at all times for its cultivation, a readiness of the faculties, a power of decision, and a courage for responsibility. Sensitive by nature, he must ever feel acutely not only the sufferings he gazes on for his bread, but the imperfections of the art he employs for their alleviation. He, perhaps, may never see the beauties of a science so shifting and inexact as Medicine. He must journey always in obscurity, mostly in danger; and unless animated by the highest motives, can never cease to despond. Deficient in means, he must fight without weapons: and not only must bear his wounds with fortitude, but must hide them if he hope for mercy. Not only must he run the gauntlet of life, but for him there is no escape if he even utter a cry.

When will the lust of gold be stayed? When will satiety of power pall on men, that truth and purity may shed their radiance, and where they fall, be blessed? When will the world's vision cease to view all things through gold's glary glory, and see the beauteous sunshine on the work with heaven's blessing? When will "Love thy neighbour" cease to be a mouthing, and those who act upon the law, rank though with naked feet, above the high in title and in place? When will wisdom take precedence of rent rolls, and the pale beauty of christian practice beam upon a calmer sea of hushed and human passions?—that what is good may no longer be great by chance, but by desert; and what is virtuous in action astonish the world no longer when wedded with success?

But let us beware, lest the recollection of not one only whom death here links with his rarer brethren, but of others whom contrast with the examples before us conjures up, lead us to lay too much upon the world and too little on ourselves. Grievances are mostly the comforts of the weak; and in pointing to the exceptional successes of men even of the highest merit, we should not charge the world with an obliviousness of benefits it never knew it had received, and a disregard of merit it was unable to appreciate. For the world is a noisy world, and withal exceedingly busy. It has scarcely time to seek out merit obscured by its own modesty. It is unable to decide on matters of abstract acquirements, and on a skill remote from its own experience. And not unseldom, must we confess, that when the world calls upon

us for a choice, we are found to be doubtful of our own champions, and frequently engaged in reviling our idols. Success is so rare, in the social point of view, that those who can assist one fortunate to attain it, would be more than human if they lent their aid; and dissatisfied with ourselves for characteristics that the world loves not, we may possibly blame for its coolness, the regard we ourselves have deprived of its warmth.

The very character of the medical mind sufficiently accounts for the rareness with which Medicine is bidden to a share in the honours the world can bestow. Congenial in private life; leader in social progress; foremost in acts of charity and of mercy; the practitioner in medicine thrown into public life is at once unsuited and out of place. With a youth given to studies of an inexact character, his views present none of that distinctness that satisfy the reason; nor are they enunciated with that vigour and charm that only those trained in exact science can acquire. The highest functions of the mind are given to analysis. The greatest cultivation is bestowed on the senses. Consequently, though he can please, he can seldom control or create; and though he may be esteemed for his varied knowledge, he is seldom sought for the solidity of his powers. Perhaps no medical man was ever feared; perhaps but few who are not widely respected. But to achieve the success we allude to, there is nothing more fatal than reputable benevolence. For the world gives nothing to goodness in the abstract; and perhaps it is more to be pitied than blamed, that its rewards are sought from it by daring rather than desert, and obtained through its fears rather than its gratitude.

If this then be no prejudiced glance at the various causes which operate to the exclusion of so many from success and honours, that similar application and integrity would insure in other walks of life, it may fairly be assumed that success in medicine, in the full and worldly acceptation of the term, necessitates the highest endowments and capacity, and when obtained, is in itself proof of their possession. Nor weighing that success with the merits of the man, can any stronger evidence be found in the history of the profession at all times, than presents itself spontaneously in the person of Sir Philip Crampton.

Foremost among men of whom Irish surgery is proud—singularly gifted by nature, and favoured by good fortune—Sir Philip Crampton stands out forcibly as the brightest ornament of the profession he adorned.

The family from which Sir Philip descended, originally migrated from South Cottingham, Notts, and settled in Ireland in the reign of Charles II. Sir Philip was born in Dublin; was apprenticed to Solomon Richards; and saw active service, as staff assistant-surgeon, at the invasion of the French in 1798. Appointed surgeon to the Meath Hospital before he had completed his twenty-first year, and even before obtaining his diploma, Philip Crampton began practice in Dame-street. Finding—and, no doubt, not to his surprise—that practice at so early an age did not

flow in with great rapidity, Crampton, in conjunction with Peter Harkan, who took the anatomical department, established the first private school of anatomy and surgery in Dublin. He himself lectured on physiology, pathology, and surgery; and the increase in his practice, which had become encouraging, happened at this time to be materially assisted by the accident that befel the waiter at the Richmond Tavern, opposite Sir Philip's house in Dawson-street. The emergency was likely to have proved fatal; and Crampton got much commendation for the readiness with which he proved himself equal to the occasion by performing tracheotomy.

At the time of the death of Mr. Stewart, Philip Crampton had become chief surgeon to the Lock Hospital. He resigned this on receiving from the Duke of Richmond the appointment of Surgeon-General to the Forces in Ireland. He became Surgeon-in-Ordinary to the King; and was made a baronet by her present Majesty in 1839.

More perhaps than most men, and certainly at any one period of his life, more than most men of his age, Sir Philip Crampton enjoyed life. Nor is it saying too much to affirm, that at the age at which the appetites and faculties usually decay with failing nature, Sir Philip's animal spirits were at their highest, and his pleasure in living most intense. With him, life itself was an enjoyment which acquired but little additional zest from the appliances of modern luxury. He was passionately fond of athletic and out-door exercise. He was a first-rate rider, kept his own pack of hounds, and seldom missed a day's sport when in the height of his practice. His senses consequently partook of such acuteness, and his perceptive powers were so vivid, that these in themselves enabled him as it were to dispense with intricate processes of thought, in forming a swift and correct conclusion in any case that came before him. His diagnostic powers were unrivalled. Disease was to him not so much a puzzle as a picture, for the very difficulties of a case were to him but so many features. With him surgery was not so much a profession as an instinct. He operated consequently as a master. His boldness never partook of rashness; for his experience had been unequalled, and his knowledge of anatomy was profound. He could consequently arrive at results in a less time than most men take to lay down their premises. But let no one entertain the vain thought that the possession of even such gifts as those with which Sir Philip was endowed, can achieve a like reputation, and a success as glorious, unaccompanied by the keystones to this admirable character—industry and perseverance. For forty years Sir Philip worked unremittingly in the wards of the Meath Hospital; nor did the unceasing claims upon his energy, of both his public and his private practice, prevent him from carrying on with ardour those literary and zoological pursuits in which he excelled. His essays and papers are to be found in profusion, in all the medical periodicals of the day. His discovery of the *Musculus Cramptonianus* by which the eyes of birds are

accommodated to the different distances of objects, obtained his election into the Royal Society; and his abstract scientific acquirements were such as ensured his repeated re-election to the President's chair, both at the Zoological Society and the College of Surgeons.

In every sense of the word Sir Philip Crampton was a gentleman; and on his claims to that title alone, would have achieved a name, without the aid of his profession. His tastes were elegant: his manner, in the highest degree courtly and fascinating. Of commanding form, and rare beauty; of noble nature, and fearless disposition; he displayed at once a merit too signal for detraction, and compelled an admiration too deserved for envy. For eloquence he had no rival in the profession. His ornaments were chaste and felicitous. His method of arrangement such as presented the most complicated subjects, at once in a lucid and attractive form. But what, perhaps, tended mainly to place him in his elevated position, and to maintain him where others, from the inconstancy of the great or failings of their own, must have descended, were his social qualities and conversational powers. His language was copious, and well chosen; his style pleasing, though emphatic; his fund of anecdote and raillery inexhaustible, and inoffensive. His own feelings were too sensitive to admit his giving pain to others; nor could the least of his admirers allege, that his humour, which was great, and his sarcasm, which was powerful, had ever been employed to ridicule the weak, or to deride sacred things.

The bust of him by Moore, in the theatre of the Meath; the crowds that followed him to the grave; the reverence with which his name is still mentioned; evidence the deep affection Sir Philip had inspired among all classes.

The "*Dublin Dissector*" has perhaps done more to further a knowledge of practical anatomy than any other work that ever issued from the press. On the ground of its authorship, therefore, Robert Harrison is deserving the sincere and lasting respect of his professional brethren; a tribute they will, moreover, pay willingly and with regret to the author of the *Surgical Anatomy of the Arteries*, and his classical contributions to the *Encyclopedia of Anatomy and Physiology*. Surgeon to Steevens's Hospital, Professor of Anatomy in Trinity College, to which he had been translated from the College of Surgeons, an excellent lecturer, an honourable man, and a staunch friend, Harrison was snatched away, prepared by his blameless life, indeed, but not by the warning he received. He was heard at the hospital in the morning to express a wish he might die suddenly, and not by such a lingering death as Sir Philip's. During the night he was seized with apoplexy, and next morning was no more.

Unappeased by the victims from our ranks in the year 1858, nor content to wait for the hecatomb of 1860, Death took from among us, in

December, 1859, one to whom obstetric medicine is no little indebted for its present dignified position in Europe. William Fetherston H Montgomery died on the 21st of December, at his house in Merrion-square. His reputation had extended and raised the credit of Irish midwifery wherever scientific medicine had cultivators throughout the world. Nor was that celebrity at all incommensurate with his local fame, the extent of his abilities, and the blameless character of his life. With indomitable energy, with profound transcendental knowledge, and possessing a rare acquaintance with the science of embryology as cultivated by the German school, Dr. Montgomery at once was the most lucid expounder, the most skilful practitioner, and the most advanced cultivator of his art. To his unaided abilities he owed his success; to his energy, to his devotion to science, and to his disinterestedness, his survivors are indebted for the Obstetric Museum, which owns no superior in Europe. Extensive as it is, the collection formerly in the College of Physicians, and now enriching Queen's College, Galway, was the work of his own hands; nor could the unceasing duties of most extensive practice, or the advance of years, prevent him from adding to the collection up to the latest period of his life. His career was precisely that which might have been predicated from his youth. He entered Trinity College, Dublin, in the year 1817, and there received a scholarship, bestowed only upon those who, like himself, displayed rare classical tastes and acquirements. To these, abiding with him through life, may be referred that pleasing style of delivery which made his lectures so popular, and the lucidity and grace which gave them so rare a value; and the same elegance of idea and happiness of expression, may be abundantly observed in his classical work *On the Signs and Symptoms of Pregnancy*, which, though it was not needed to extend his reputation, has certainly served to place it beyond dispute. Of equally signal merit, and, perhaps, of greater originality, are his observations on the Spontaneous Amputation of the Fetal Limbs in Utero, which alone would entitle him to the first position in the walks of science, even without the additional fame that justly attaches to the author of "Personal Identity," and "Succession of Inheritance Legitimacy" in the *Cyclopedia of Practical Medicine;* contributions which, from the learning and power of grasping and harmonizing facts that they abundantly prove their author to possess, are worthy to be placed among the most valuable monograms in this or any language. Enjoying a most extensive and lucrative private practice, Dr. Montgomery attained the highest dignities his profession could bestow. He was a Fellow of the College of Physicians as far back as the year 1829, but he did not proceed to the degree of M.D. until 1852. He was also elected President of the College, and held the Professorship of Midwifery for thirty years, worthily fulfilling the duties of the post, whose institution was due to his early exertions.

Snatched away, like Harrison and Montgomery, while busy at his post, Henry Marsh now claims our sorrowing mention. To many there are given intellectual and moral powers which permit their possessors, if the coast be but clear, to steer through life without shipwreck; and which, if not enabling them to surmount unwonted dangers, at least prevent them courting unnecessary disaster. But few men possess that strength of will and that clearness of moral vision which in emergency endow them with forethought, and, nerving the hand to seize the helm with unflinching grasp, render their trials and their perils subservient to progress. But of such a rare combination was the man who filled for so many years, so prominent a position among the physicians of his time. At 12 years of age he was destined by his father, the rector of Killinane, to agricultural life; and, until 15 years old, his studies were entirely directed to corresponding pursuits. In 1806, however, being then 16 years of age, his ambition was excited by a chance companionship with a stranger, a Fellow of Trinity College. He abandoned his rural occupation; and at 17, entered the University of Dublin—firstly under the tutorship of the present Right Hon. P. C. Crampton, and subsequently under that of the Rev. Dr. Sandes, afterwards Bishop of Cashel. His views were for the Church; but having about this time become strongly impressed with the religious tenets of the celebrated John Walker, he determined to enter upon the study of surgery instead. His design was to serve in the Peninsula; and acting upon the advice of his cousin, Dr. John Crampton, he became one of the pupils of Sir Philip. He happened, however, to wound the index finger of his right hand, and the subsequent loss of a portion of it, compelled him to modify his plans of practice. In 1818 he graduated in medicine, and took the licentiateship of the King and Queen's College of Physicians. In 1820 he was appointed to the vacancy in Steevens's Hospital, created by the promotion of Dr. John Crampton. He was one of the original promoters of the then medical school in Park-street; and, in 1827, succeeded Dr. Whitley Stokes in the lectureship on the practice of medicine to the College of Surgeons. This appointment, from the extent of his private practice, he was compelled to relinquish in 1832. Made Physician-in-Ordinary to the Queen in 1837, he received a baronetcy in 1839. He became President of the College of Physicians in 1840, and Senior Physician to Steevens's Hospital in the same year, on the death of Dr. John Crampton, his old relative and friend.

So singularly unchequered a career of prosperity, succeeding to a youth whose education and whose plans had been as signally shifting, points at once to the adaptive genius of the man and the inherent vigour of his nature. Matured by the experience he soon acquired in the discharge of duties under which a less determined mind must have succumbed, Sir Henry Marsh made those valuable endowments subservient to inductive medicine with a facility and success to which the only parallel can be

found in the practice of Robert Bentley Todd. In the pursuit of pathological knowledge; in the tracing the causation of morbid processes to an ultimate fact; in the endeavour to reconcile the clinical features of disease, Sir Henry Marsh was alike zealous and successful. The confidence he felt in himself he inspired in others; his rise consequently was as steady as it was rapid, and when secured was as firmly maintained.

His moral was his incentive to action. His trust and his faith the measure of his success. Believing in the dependency of result upon cause, he aimed not so much to succeed as to deserve. Not limiting his belief to the restricted area of the senses, with no narrowed view of labour and of thought, he was impressed earnestly and stedfastly with the beneficence of design, and the justice and right of things as they are. Having no scepticism he had no mistrust, but used gratefully, and with confidence, the means nature placed at his disposal. His work was consequently worthy even of the highest intellect, and was stamped with a beauty that graces but seldom the fruits of even greater learning and genius. Knowing he did his best, and knowing by the light that was in him that that best was good, he was at once prompt in his theory and self-reliant in his practice. For to him labour was support independent of praise; nor could applause add any thing to the silent pleasure in doing good and in mitigating suffering, he felt as a Christian Philosopher.

Sir Henry Marsh was of good family—no small advantage to a man whose professional success, as in medicine, depends so intimately on his social qualifications. His ancestors originally resided in Gloucestershire, one of whom, Francis Marsh, afterwards Archbishop of Dublin,[a] settled in Ireland, and died in 1693. Sir Thomas Molyneux, the first medical baronet ever created in Ireland, was one of his maternal ancestors. The prestige of his name Sir Henry did not suffer to deteriorate by any lack of courtesy and hospitality; but by the free display of these virtues in his own person, and on all occasions, he mainly contributed to invest the Dublin School of Medicine with a social reputation in no unworthy harmony with its deserved scientific fame.

Sir Henry Marsh freely indulged those literary tastes which to him were so congenial. He was a prolific author, and the extent and variety of his communications to this Journal, are themselves abundant testimony to his exceptional powers and attainments.

On the 1st December, 1860, Sir Henry Marsh was on the point of leaving his house a little after nine in the morning, when he was seized with vertigo, and, falling, fractured a fibula. On the same day, at seventeen minutes to one, he expired. His remains repose in Mount Jerome Cemetery, having been followed to the grave by a larger concourse of mourners than had been present at any interment in Dublin for many previous years.

[a] Founder of Marsh's Library.

No school in Europe, of a surety, ever sustained such grievous losses in so short a time, or furnished death with such illustrious victims, as the Dublin School of Medicine during the last twelve months. Long indeed will Steevens's and the Meath remember the fatal cycle which robbed them, not only of their leaders, but of those who stood next to replace them. Scarce had the sorrow for Sir Henry Marsh begun to lose some of its poignancy, than death, restless and insatiate, seized upon that brilliant and eloquent man, whose talents and whose energies had made the name of Porter respected, wherever scientific surgery owned a footing.

Classical as a writer; brilliant as a lecturer; earnest as a worker; and excellent as a man, William Henry Porter was one of the brightest ornaments of which the Irish Medical Profession can boast. His classical acquirements—stamping every page of his work on Aneurism, of his book on the Larynx and Trachea, of his Essays on Syphilis, and of his Lectures on Inflammation and Lithotomy—had mainly contributed to his brilliant academical successes when a student in Trinity College; and the fruits of the cultivated training he had received in early life, displayed themselves at maturity, undiminished by any loss of that remarkable energy which had early been one of his chief characteristics. Having entered upon the active duties of professional life, this vigour of purpose was in itself sufficient to achieve for him the reputation, which as long back as forty years, attached itself to the operator who had successfully applied the ligature to nearly all the larger arterial trunks. Of so vigorous a turn of mind, it is not astonishing that William Porter should soon have made himself conspicuous for the daring of his operations, attended, as they were, by singularly happy results. The particulars of his attempts on the innominata artery and its fortuitous issue, are long since familiar to the student of a special department of surgery. The patient had an aneurism of the innominata. The operation was complicated by circumstances of peculiar difficulty. When the artery was exposed it was found to be atheromatous. The ligature was, consequently, not applied, but the irritation set up eventually led to consolidation of the aneurism. Since then analagous steps have, in other hands, led to cure of aneurism in the subclavian. One of the last operations of Mr. Porter was the ligature of the femoral artery, at the upper part of the triangle; and the particular advantages of the incision being made parallel to Poupart's ligament, as was done on that occasion, are described in our sixtieth number, by his, son, Mr. George Hornidge Porter.

An earnest man, William Porter had strong opinions. But as he was a thinker, these opinions were sound; though, as he was strikingly original, they were not always readily received. But as he had worked for them and always conscientiously, he was not the man to give them up. He defended them always with keenness and clearness; but though, from his thorough spirit of independence, he would not hesitate to crush

a formidable antagonist, yet, never did he disdain to remove even the simplest difficulties that beset the most youthful of his students.

Something of the manner, and not a little of the social success of Sir Philip Crampton, descended to his favourite pupil, Francis Rynd. "Dear Frank," as Sir Philip and his intimates used fondly to call him, held, like his master, a surgeoncy at the Meath Hospital, and, in compliance with the last request of Sir Philip, encased, with his own hands, his body in cement. Francis Rynd enjoyed a large public and private practice, and a social position altogether unequalled. The first, in the wards of the Meath Hospital, extended over twenty-six years; and, though scarcely securing for him a scientific position commensurate with his social status, procured him a fame of a high character, and most assuredly deserved. Shrewdness, and a turn of mind eminently practical, are but seldom associated with habits and methods of thought, admitting great literary distinction; nor do we find that any exception to this can be found, either in the work of Francis Rynd on Stricture of the Urethra, or in his contributions to this or other journals, some of which, notwithstanding, were in progress at his death. But his operative skill was perhaps of so high an order, that it would fairly have graced a rarer scientific zeal, and information more extended and profound. Francis Rynd was tall and of aristocratic appearance; his head was remarkably intellectual, and his brow noble. His manner was dignified and attractive, and by the sick bed, most affectionate and tender. His patients were, without exception, his friends; for his tact and delicacy, in truth, were admirable; and, considering how rare and how indispensable are these requisites to social success, it is not surprising that, conscious of their possession, he should have aimed at a celebrity more local than extended, and a reward more practical than conspicuous. Francis Rynd knew his profession well, but he knew men better. Yet he was no selfish man. He was offered, both by Lord Eglinton and the present Vice-Roy, many opportunities for profit and advancement, which would have tried, very severely, one less disinterested. But he resolutely declined to profit by a regard won through professional intimacy, and set a noble example to not a few of those who admired him the least. For work that was not to be done Rynd may have been unsuited; but no man could do better, if so well, the work which he had to do. He estimated rightly the value of ties between person and person, though he might often be charged with riveting these at the cost of professional intimacy. Yet we should hesitate to say he was unwise to value the worldly wisdom so peculiarly his gift, or to strive but little for an admiration labour only could elicit, at the cost of an affection his character so signally compelled.

Fortunate like Sir Philip in his life, more fortunate than he in the manner of his death, Francis Rynd, respected by his colleagues, and

beloved by his friends, received in the grave the best tribute to his merits —the unrestrained tears of the noblest who followed him. To these his admirers may at least point in evidence of the power he possessed to secure the confidence of his patients, and of the loyalty with which that confidence was invariably preserved.

Among those grouped around the death-bed of Sir Henry Marsh, prompt at the call of suffering, and eager to solace the last moments of their professional brother, stood the Nestor of Irish surgery, destined soon—and how speedily?—to follow him on his long journey, and in like manner, to be mourned by the many who had benefited by his skill, and profited by his example. That skill was profound. That example was indeed brilliant. But it cannot be said that the ability of James William Cusack was enhanced by the charm of eloquence, or that the wisdom of his precepts was rendered more impressive by the attraction of his manner.

Descended from an ancient family, James William Cusack was admitted at the College of Surgeons in the year 1812. He had previously obtained a Scholarship in Trinity College, and, on taking his degree, a classical gold medal. He was early appointed Resident Surgeon to Steevens's Hospital, and subsequently, to the Surgeoncy of Swift's. In 1850 he took the degree of M.D. in the University of Dublin, and in 1852 was elected to the University Professorship of Surgery, founded in that year. He was three times President of the College of Surgeons, and, on the death of Sir Philip Crampton, was made one of the Surgeons in Ordinary to the Queen.

He was great without seeming to be great, and, we believe, without knowing he was great, for to the last he could never overcome a nervousness which amounted almost to infirmity, and which his assumed brusqueness of manner could but imperfectly veil. "It was not," said he, speaking to the Editor of this Journal, in allusion to his abandonment of operations, "that my hand is not steady," and he held it out, being then more than three score and ten years old, as firm and as steady as it had ever been, "but I am so anxious, before operating, that I feel the strain too much for my system. You will be surprized," said he, "when I tell you that from my first to my last operation, I have never been able to sleep the night before, but lay thinking how I should operate, what difficulties would arise, and how I should meet them." Lecturing, this nervousness was obvious enough, but few would have observed it when he handled the knife. Then, he seemed possessed of the calmness of a master. Prepared for every emergency, his internal resources under perfect control, he left the observer in admiration, not more at the skill of the performance than at the power of adaptation he displayed. One living surgeon—and perhaps only one—to whom the

spurting from the posterior tibial has been the signal for amputation with the same sweep of the knife, can, in this rare faculty, compare with James William Cusack. And inasmuch as this faculty essentially consists in the power to compel the mind to ignore its previous workings, and urge the hand to a fresh plan, so it is associated with the art of forgetting spontaneously what may have been unfortuitous, and which, if shown to be remembered by the operator, will never be forgotten by his audience. Though cautious, yet bold; though desirous of aiming more at excellence, safety, and completeness than at daring, rapidity, and effect, he was once tempted to a display which might have affected him injuriously, had he not possessed this admirable instinct of readiness and self-command. "I was operating once," he said to us, "on a case of stone. They were all there, Crampton, Peile, and so on, and they must needs time me. I cut into the rectum there and then. But they didn't see it *and I didn't tell them.* But notwithstanding all the patting on the back I got, and what a fine fellow they said I was, you will never see me operate when I'm timed again." And though the man recovered, Dr. Cusack never got over his dislike of being timed, nor would he allow himself to be minuted if he had a suspicion it was being done.

Though his fame was so universal, his ability as a writer was not commensurate with his skill as a surgeon. Of his deficiencies in this respect, as in speaking, he was himself well aware, and often indeed did he express his regret, in conversation with his intimates, at having omitted to remedy his want of readiness and fluency. It is remarkable, however, that he was himself accustomed to attribute a great part of his subsequent fame to his paper on the Extirpation of the Lower Jaw; but, as is not uncommon with men of great abilities, he may have assigned undue importance to those powers in which his excellence was least marked.

Though a great and most successful operator, Dr. Cusack was one of the staunchest advocates of conservative surgery, and regarded operations as the opprobia rather than the glories of his art. Yet he owed no small measure of his success to his operation on the carotid. The patient was a man of note, who had been wounded by a bullet in the neck, at Tipperary. He was dying from hemorrhage, when Cusack saw him, and at once cut down on the artery and tied it. The patient recovered; and, as in the similar emergency of Sir Philip Crampton, the practice of the operator rapidly increased from that time.

As a lithotomist James Cusack was eminently fortunate. He operated for stone 65 times, and his mortality was remarkably low. He preferred lithotomy to lithotrity; and his preference, no doubt, took its origin from a case in private practice, which, subsequent to the use of the lithotrite, terminated fatally from diffuse inflammation. Sir Philip Crampton assisted in the operation, and testified to its skilful performance.

Although, however, we do not find the highest literary capacity in the

writings of this eminent man—yet those writings, when collated, assume no inconsiderable form. His papers in the *Dublin Hospital Reports* extend from 1817 to 1830, and evidence the eminently practical tone of his mind. From 1832 to 1846 Dr. Cusack contributed many papers to the *Dublin Journal of Medical and Chemical Science;* and up to the period of his death his contributions to these pages were not without material influence upon the progress of philosophic and operative surgery. We would especially direct attention to his papers on the Treatment of Aneurism by Compression; on Venereal Disease of the Testicle; on Rupture of the Bladder; on Cleft Palate. They are abundant evidence of the originality of his mind, his sterling and unaffected sense, his boldness, and his dexterity. Throughout the present and the first series of this Journal are to be found many cases deriving their great value from the appended clinical remarks of Dr. Cusack. His two papers, moreover, written jointly, and published in our fourth and fifth volumes, on the Mortality of Irish Medical Practitioners, have laden the profession with a debt of gratitude as lasting, as that which Science already owed to him and William Stokes.

In James Cusack, as it has elsewhere been well and affectionately expressed, the public had to mourn a physician, as well as the most bold and dexterous operator of his day, and the medical profession in all its branches sustained an irreparable loss in the passing away of the man who shed a lustre on the Dublin School of Medicine, who was the embodiment and impersonation of professional honour and honesty, and of whom, dying full of years and honours, it may be said, as Pope did of Addison, that throughout that long and unsullied career

> "He sought no private end,
> He gained no title, but he lost no friend."

He was a great medical surgeon, observant, cautious, and far-seeing; and his practice (as well as the actions of his life) was characterized by strong common sense. No one ever heard him utter a frivolous or foolish expression, and he was utterly devoid of personal vanity. In the good old days of apprenticeships, he educated more surgeons than any other man in the profession. Undemonstrative, yet firm in opinion, his patients accepted his word as law, and he was one of the *safest* consultants to whom a professional brother could possibly have recourse.

He died at his post. His unobtrusive, honest life stayed, as it should have done, in action. He had suffered long from diffused bronchitis—the symptoms of which became aggravated, and speedily displayed a fatal character, after his visit to Steevens's Hospital, on the 14th of September. On the 25th the profession lost in James Cusack its chief, and every Irish surgeon a brother. Rich in worldly wealth, the tribute of the public to his long service, he died possessed of yet greater treasure than the world

can give—the store secured by a heart of gold that never beat but nobly through a well-spent life.

Still to the faltering pen come for our tender record the names of Ledwich, Harkan, Kingsley, Brereton, Tagert, Cathcart Lees, O'Beirne; nor either they, or those of brighter note, placed as the herald of fame would sound them, but as death called them away. And now that the proud wave of their lives has dashed into the soon-forgotten spray against the rock of the Grand and Immutable Will, and all the treasures that they bore lie on the strand, the common property of men, let us take to ourselves the light of their just lives, and, with as high a courage as they owned, and with no greater care for self, foster the science that they loved, and that now so bitterly mourns them. For that science, though owing them much, is but imperfect yet. But the better part of man, which is of perfect love, owes them still more. Owes them the debt of their self-sacrifice; of their deep sympathy; of their unflinching toilsome lives which lifts its voice higher than monuments, and tells of their works more than all the conceits of art, and all the tortured flattery of design; ringing in every tread of their old worn wards, and in the sob of every sufferer lying where they have ministered, into the Song of Hope that such as they, the pure in heart, shall see the face of God.

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MEDICAL SUPERINTENDENCE OF ASYLUMS.

[In the Review on Insanity in the last number of this Journal, Vol. xxxii., p. 369, there appeared an account of a Deputation to the Chief Secretary (Sir Robert Peel) from the Association of Medical Officers of Asylums, in reference to the Medical Superintendence of Hospitals for the Insane, and advocating the views of the Resident Physicians. We have since been requested by the Visiting Physicians to insert an account of a Deputation from their body, which waited on Sir Robert Peel, in reference to the same question—a request with which we feel bound to comply, on the principle of *audi alteram partem*.—Ed.]

A Deputation of the Visiting Physicians of Lunatic Asylums in Ireland, consisting of Drs. Cusack, Croker, Banks, Law, Tuohill, Ferguson, Cumming, Dillon, and O'Meara, waited on the Chief Secretary (Sir Robert Peel) on 31st August, 1861.

The object of the Deputation was to lay before the Chief Secretary their views relative to the respective duties of the Visiting Physicians and the Resident Medical Superintendents of Asylums and Hospitals for the Insane. The fact of the Medical Superintendents having brought under the notice of Sir Robert Peel their opinions, rendered it necessary for the Physicians to come forward; the more especially as a statement had been made by the gentleman who addressed the Chief Secretary, which might mislead, and which the Deputation wished to correct. It being known that the rules for regulating Lunatic Asylums were being revised, rendered the present occasion peculiarly opportune for directing the attention of the Government to the results of the experience of the Visiting Physicians on this most important subject.

The high state of efficiency of the Irish Asylums, to which Sir Robert Peel bore testimony in the House of Commons, the Deputation thought might fairly be attributed to their having Visiting Physicians. The Deputation further remarked, that any modification of the rules regulating the relative duties of the Medical Officers which would have the effect of placing the insane more under the medical care of the Superintendents than they are at present, and thus so far withdrawing them from the care of the Physicians, would act most injuriously in two ways: first, in limiting the advantage they at present enjoy of the skill and experience of men constantly engaged in general practice; and, secondly, in the loss to the public of the knowledge and experience acquired by the Visiting Physician in his attendance on the inmates of Hospitals for the Insane.

Dr. Lalor, the Medical Superintendent of the Richmond Asylum, when expressing his views on the subject of the relative duties of the Medical Officers of Asylums, referred to the Report of the Royal Commission, and its recommendation, and, in so doing, made a statement as to the constitution of the Commission, which it was the duty of the Deputation to correct. He said—"When I consider that this is the recommendation of the medical members of the Commission, who have had large personal practical experience of the subject, and who have obtained a high reputation and promotion in consequence, I cannot think that you will allow it to be outweighed in your mind by the single opinion of a gentleman, who, however high his character may be in some other branches of the profession, has had so few opportunities of acquiring knowledge in this." It is necessary to refer to the constitution of the Parliamentary Commission, for the purpose of correcting this error, which has been before alluded to. The Commission consisted of Sir Thomas Redington, Mr. Andrews, Q.C., Mr. Ledwidge (a Lawyer by profession), Dr. Corrigan, and Mr. Wilkes (now a Commissioner in Lunacy, but formerly a Superintendent of a Lunatic Asylum).

There were, then, only *two* medical members—Dr. Corrigan, Physician to the Queen, and Mr. Wilkes, who is a surgeon and apothecary. It is scarcely necessary to observe that Dr. Corrigan holds a position of the highest eminence in his profession, and enjoys a most extensive practice. For seventeen years, he has, moreover, been Physician to the Hospitals of the House of Industry, and the Lunatic Asylum which was connected with them, containing upwards of two hundred lunatics.

Of the *two* medical members of the Commission, one (Mr Wilkes) agreed with the majority, and Dr. Corrigan dissented. That Mr. Wilkes should sympathize with the Superintendents, and thus advocate the claims of the order to which he had once belonged, was only what might have been expected. Dr. Corrigan brought a mind perfectly unprejudiced to the consideration of the subject, and not only dissented, but, impressed with the great importance of the interests at stake, embodied his objections in a letter to Mr. Walpole, the then Secretary of State.

The Deputation could affirm positively, that this movement on the part of the Superintendents was far from being general; for there were some of their body who declined taking part in it, acknowledging that they felt it a great advantage to have within their reach the skill and experience of men whose assistance, they were not ashamed to confess, they needed in the difficulties inseparable from the diseases of the insane.

The Deputation assured Sir Robert Peel, that the Physicians had no wish to ignore the professional status of the Superintendents; on the contrary, they willingly conceded it; although, up to the present, the Superintendents are not entitled, by the rules of the Privy Council, to any position beyond that of managers.

Without meaning to disparage the Superintendents, the Deputation felt bound to represent that they were, from being excluded from general practice, unequal to the efficient discharge of the grave responsibilities to which they aspired, viz., "the treatment of the inmates of asylums, both as regards their bodily health and mental diseases."

The Deputation was fully alive to the value of Resident Medical Officers in Hospitals for the Insane; but they should be, as in other hospitals, subordinate to the Visiting Physicians, who should direct the medical treatment in all cases of serious bodily disease.

In conclusion, the Deputation directed Sir Robert Peel's attention to the following letter of Dr. Corrigan, whose opinions upon all subjects connected with medicine are worthy of the highest respect:—

"Dublin, 4, Merrion-square, West, July 3, 1858.

"Sir,—In the Report of 'the Lunatic Asylums (Ireland) Commission,' which has been forwarded to you, I have felt it incumbent on me, while concurring in the other parts of the Report, to have my dissent recorded on what appears to me a most important practical point. I was desirous, and I made a request to that effect, that my reasons should be appended to the Report, as, on consideration, I saw grounds to apprehend that no future opportunity of stating them might occur; and I hoped to be able to show that I had sufficient reasons for the view I took, it being, of course, understood that the Commissioners, differing in opinion, should also append any observations they might think proper. The majority of the Board did not, however, consider that my request should be complied with, and I therefore beg to forward the enclosed communication, containing my reasons in support of my view, with a hope that you will (if you see no impropriety in my request) have it laid before the House, or published in whatever way you may see fit, so that the point at issue in the Report may receive the fullest consideration. I would not take the liberty of making this request, if I did not feel a very strong conviction that the question is one of the utmost importance to the proper care and protection of the most afflicted of our fellow-creatures.—I have, &c.

(Signed) "D. J. Corrigan.

"Right Hon. Spencer H. Walpole, M.P., Secretary of State,
"Home Department, Whitehall, London."

"I am of opinion, as expressed in the body of the Report, that 'there should be a Visiting Medical Officer attached (as heretofore) to each asylum; that his attendance should not be dependent on the discretion either of the Resident Physician or of the Local Board, but that he should visit the institution daily. That while the Resident Physician and Manager should have general charge of the institution, and be responsible for the treatment of the insane, as such, the duty of the Visiting Medical

Officer in their regard should extend only to cases where his attendance may be required in consultation by the Resident Physician, but that the Visiting Medical Officer should daily visit all cases whatever confined to bed, in seclusion, or under restraint. That he should see, with as little delay as possible, all cases of injury, accident, and childbirth, and record such observations on them as may appear requisite. That he should be directly responsible for the treatment of the sick, as distinguished from the mere insane. That in all cases of discharged patients, the certificate of discharge should be signed by both Resident and Visiting Physicians; and that, in all cases of death, the record of the illness and cause of death should be signed by both the Resident and Visiting Physicians.'

"For the following reasons, I consider it would be wrong to commit the medical, surgical, and moral treatment of the inmates of a lunatic asylum, female as well as male, to the uncontrolled management of any one individual. If there be not a Visiting Physician, this would be the state of each asylum; for we have it in evidence that Governors and House Committees as a general rule do not inspect the asylums: nor even, if they were inclined to do so, would they be capable of efficiently fulfilling such a duty, so that, if there be not a Visiting Physician, whose office it would be to see all cases of illness, accident, injury, pregnancy, and childbirth, as well as all cases subjected to seclusion or restraint, there can, in my opinion, be no sufficient safeguard against cruelty, ill-treatment, neglect, and even immorality. It must be remembered, that the inmates of a lunatic asylum present no analogy to the inmates of any other public institution. The inmates of gaols, workhouses, and hospitals are sane, and can bring their complaints before visitors while in those institutions, and will be listened to, or, on leaving, can have them investigated; while the poor creatures who are the inmates of a lunatic asylum may be terrified into silence, incapable of stating their wrongs or their complaints, and perhaps may have their well-grounded assertions of past ill-treatment considered as the mere delusions of their imagination. I do not consider that any periodical inspection, at intervals more or less distant, will be a sufficient substitute for the daily inspection of a visiting physician.

"I do not think it far-fetched to conceive the existence of abuses in a lunatic asylum, evading detection for a considerable time, if there be no officer daily visiting from without, and free from all connexion with those resident in the asylum, who may be so implicated, that each may be unwilling, or even afraid, to make a disclosure on the other, while the lunatics are all the time the sufferers. The following extract from the last Report of the Commissioners of Lunacy in England will support my argument (*vide* Eleventh Report of the Commissioners in Lunacy to the Lord Chancellor, ordered by the House of Commons to be printed, July 7th, 1857):—

"'The sudden death which had formed the subject of inquiry was that of a pauper lunatic, Daniel Dolley, 65 years of age, which took place in the Surrey Asylum on the 9th of April last, and of which notice was transmitted by Mr. Snape (Resident Manager and Medical Superintendent) to this office on the 14th, as produced by disease of the heart; such having been the finding of a coroner's jury at an inquest, held on the 12th by Mr. Carter, the coroner of West Surrey. On the day of the inquest, however, a letter, dated the previous day, and addressed to the Commissioners, not signed by name, but purporting to come from the attendants of the asylum, had reached the office, which led to the suspicion that the inquiry had been so conducted by Mr. Carter, as to elicit none of the material circumstances attending the death. . . . On that occasion (the inquest), no questions had been asked, nor any information given, but such as might seem to exhibit an ordinary occurrence of sudden death. . . . . The entire substance of Mr. Snape's evidence was, that, having found the deceased violently excited on the morning of the 9th, about half an hour previous to his death, he prescribed a shower-bath. . . . . That he found him dead half an hour later; and that, on subsequently making a *post-mortem* examination of the body, he discovered enough to account for the death, sudden and unexpected as it had been, in extensive disease of the heart.'

"The following are the facts that came out as to the old man's death, on subsequent inquiry; and I shall still give them in the words of the Report, merely omitting unimportant parts:—

"'On Mr. Snape's coming, in the course of his usual round of the wards, into No. 3, and having it reported to him that Dolley had kicked another patient, he called the old man by his name, and, heedless of his abuse, told him to 'Come this way,' walking, himself, in the direction of the shower-bath.'

"Barnett's (the attendant) evidence may be given in his own words:—

"'After I had him in, and the bar down, Mr. Snape says, 'Now pull the string, Barnett; keep him in half an hour.' . . . . Before Mr. Snape left, however, he gave another instruction: 'Give him a good dose of the light-coloured mixture;' not restricting it by any condition having reference to the strength or weakness of the patient, or to the continuance or otherwise of his excitement. . . . . He (Barnett) gave Dolley, on leaving the bath, in compliance with the order, four tablespoonfuls of the mixture, containing two grains of tartarized antimony. . . . . Dolley remained in the bath twenty-eight minutes, ... 'the water always pouring.' . . . . 'The old man came out,' . . . 'and walked, assisted by Barnett, to the chair by the fire.' 'Here Barnett administered the tartar emetic.' . .

Half an hour before the bath he was 'excited, light-hearted, and dancing.' Immediately after the bath he was shivering. The witness Pineger goes on to state: 'I put his socks on;' . . . . 'and, on looking again at the old man, I saw him with his face drawn up, sitting in the chair, with his head right back, his mouth open, and his cheeks quite tight, as though in a fit. He was carried to bed, but before any restorative could be tried, he was dead.'

"It is only necessary to add to this detail, in reference to Mr. Snape's report of the case being death from 'extensive disease of the heart,' that Mr. Hancock, Surgeon of Charing-cross Hospital, and Mr. Paget, Surgeon-in-Ordinary to the Queen, both examined the heart, and observed no material disease, and nothing in it to occasion death. On examination of the bath by two civil engineers, it appeared that 618 gallons of water at a temperature of 45°, not many degrees above freezing, must have been discharged uninterruptedly over the person of Dolley as he stood in the shower-bath, of which the construction was such as to render, during its continuance, respiration more than ordinarily difficult.

"There is no Visiting Medical Officer attached to the Surrey Asylum. Mr. Snape had sole charge of the medical, surgical, and moral treatment of the patients. The cruelty and false entry of the cause of death in the above case would not have been left to the chance discovery of an anonymous letter if there had been a Visiting Physician to that institution to have been examined on the inquest, whose duty it would have been to have made himself acquainted with the previous circumstances of the case, to have been present at the *post-mortem*, and certified as to the cause of death; and if a case of such cruelty had very nearly escaped discovery, it is to be feared that minor cases of the exercise of bad temper and tyranny, ill-treatment or neglect, may be of frequent occurrence, and yet for a long time escape detection. This case further shows that a state of terrorism may exist to prevent any subordinate from openly giving information; for not one of all the officers or numerous attendants came forward on the inquest to expose the conduct of Mr. Snape.

"In dealing with lunatic asylums and their defenceless inmates, it is necessary to take into consideration, not how many cases of abuse have been discovered, but to reflect on how many may be concealed. All the Irish District Asylums, with the exception of the Cork Asylum, have Visiting Medical Officers. In Cork there is no Visiting Physician. The Resident Manager has the sole medical charge, calling in the Visiting Surgeon only when he deems it necessary; in fact, it is the system which is recommended by the majority of the Commissioners. The circumstances that came out on evidence in that institution, appear to me to show that that system is not one to be adopted. I can here only refer to

the minutes of the evidence generally, with the exception of that in connexion with the examination of Mr. N. Barry.

"Mr. N. Barry had been sent to the asylum under the Lord Lieutenant's warrant, and had been discharged cured. (*Vide* Appendix, Evidence of Mr. Barry.) He came before us to complain of being ill-treated by the keepers, of being beaten by them, of being confined to bed from the injuries he received, of the keepers being repeatedly drunk, of the Resident Physician refusing to permit him to see the Visiting Surgeon when confined to the infirmary, and of his also withholding Mr. Barry's letters to his solicitor, although the right of a lunatic to communicate with his solicitor is protected by act of parliament. The Resident Physician, in reply to Mr. Barry's statements, asserted that, with the exception of the allegation about beating, which he stated in a written report to have been 'grossly exaggerated and malicious' on Mr. Barry's part, all his other statements were 'more fanciful than anything else;' but that he was right as to one man being drunk. On looking over the minute-book, however, it appeared by a memorandum of a meeting of the Board, on the 13th January, that four of the servants were on that day fined for being drunk, and that another was dismissed for bringing in bottles, which, on examining her room, were found to contain whiskey, and that this occurred during the period referred to by Mr. Barry, which appears corroborative of his statements. The evidence of the Visiting Surgeon would have been most desirable in this case, as to Mr. Barry's alleged injuries, and his being sent to hospital in consequence, but it was not available from the circumstance of its being left optional with the Resident Manager to call on him in consultation; and if this system were to be generally adopted, it would happen that it would just be in the cases in which it would be most necessary to have the evidence of a third party that such evidence would not be forthcoming.

"As the treatment of insanity is a mixed medical and moral treatment, I consider it desirable that in cases requiring more than the ordinary routine treatment, there should be at hand the advantage of the experience of the two Medical Officers, each bringing his peculiar knowledge to bear upon them, just as in cases partaking of a mixed medical and surgical nature in hospital and private practice, patients under similar circumstances enjoy a similar advantage. Moreover, I do not consider that the Resident Physican or Manager, no matter how well educated he may have been on his appointment to the care of an asylum, is, after a little time, competent to treat medical or surgical diseases of a serious nature. It is practice alone that keeps up this competency, and this he cannot retain; for an asylum cannot furnish him with sufficient practice, and he can have none out of doors. I do not think it necessary to argue this at length. No one would consider for himself or one of his family the professional opinion of the Resident Physician of an asylum as of

equal value with that of the Practising Physician or Surgeon outside. In the case of the insane, the peculiar professional tact and observation, that are only maintained by constant practice, are even more required than for the sane; for the lunatics may either conceal or not feel those symptoms that will be described by the sane, and hence the Physician or Surgeon is more thrown upon his own powers of diagnosis by signs as contradistinguished from symptoms.

"There is, in my opinion, another reason for having a Visiting Physician of the neighbourhood in regular attendance at an asylum. I am satisfied his visits afford a consolation to the friends outside, and that it tends to lessen their reluctance to send their lunatic relatives into an asylum, to know that they are seen by the Physician from without; and in the event of any ill-founded rumours ever arising, of deaths or sickness from ill-treatment or neglect, the assurance of the extern Physician to the contrary, will do more to reassure them than any assertion coming from within the walls.

"The present rules for the regulation and definition of the duties of Resident Physician and Manager, and of Visiting Physician, are very defective, and hence much confusion has arisen. This was inevitable from the rules of the Privy Council having been originally based on the circumstances of the resident being a lay manager. In some of the asylums this state still exists, while in others, the majority, medical persons have been appointed residents, but still no general rules or regulations have been drawn up. In some cases, merely verbal directions have been given on the respective duties, in others none at all, the Visiting and Resident Physicians arranging their duties by a private agreement; but this confusion appears to me to prove only that some new regulation is necessary, not that the present system is a bad one.

"I have heard it as a reason for discontinuing the Visiting or Consulting Physician, that collisions would occur between him and the resident as to treatment; that injurious consequences would hence arise to the patients, and in the management of the asylums; and that the pride of the Resident would feel hurt by receiving any advice from another physician. I can attach no value whatever to what I believe to be only exaggerated or imaginary evils. We do not find that such collisions arise between the resident medical officers of our large hospitals, and their visiting physicians and surgeons; nor do we find that such collisions take place in the consultation of daily and hourly occurrence in private practice. Nor do we find that physicians and surgeons, possessed of common sense, ever object to receive professional aid in consultation, and I do not see why such collisions should be more likely to be apprehended in the intercourse between the medical attendants of a lunatic asylum than in other instances. If any little jealousy or

bickering has occurred in any instance, it has been owing to the want of rules, and would not recur under proper general regulations.

"There appears to me to be, in addition, a very serious difficulty in the working of the arrangement for the office of visiting or consulting physician, as proposed by the majority of the Commissioners. He is to be called in at the discretion of the Resident Physician; but how is he to be paid? It must either be by a separate fee for each visit, or by an annual salary. In either case the Resident Physician will be most unpleasantly circumstanced. If the Visiting Physician is to be paid by fees, then the Resident Physician, even for the most pressing cases, and in which he conscientiously feels he requires the professional aid of another, may be blamed by the Board of Governors for putting the institution to expense, and even charged with incompetency. If the Visiting Physician, on the other hand, be paid by salary, then he may find fault with the Resident for calling upon him too often, and, as he may think, unnecessarily; while the Board of Governors may blame the Resident for not more often calling in the Visiting Medical Officer; and thus a state of bickering will be engendered between two officers, whose mutual good understanding would be most desirable in the performance of their duties.

(Signed) "D. J. Corrigan, M.D.

"Office of Lunacy Commission, the Castle,
"Dublin, *July* 3, 1858."

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10. Influence of Tropical Climates in producing the Acute Endemic Diseases of Europeans, including Practical Observations on the Nature and Treatment of their Chronic Sequelæ, under the Influence of the Climate of Europe. By Sir J. R. Martin, C.B., F.R.S., &c., &c. Second Edition. London : Churchill. 1861. 8vo, pp. 778.

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21. 1. Note Concernant l'Action du Brome sur l'Iodure d'Aldéhydène. 2. Action du Chlorure d'Acétyle sur l'Aldéhyde. Extrait des Comptes Rendus des Séances de l'Academie des Sciences. Tome XLVII. 3. Sur une Base Nouvelle obtenue par l'Action de l'Ammoniaque sur le Tribromure d'Allyle, Extrait des Annales de Chimie et de Physique. 4. On the Actions of Acids on Glycol. 5. Ueber zwei neue Methoden zur Bestimmung des Stickstoffs in organischen und unorganischen Verbindungen. 6. On the Synthesis of Succinic and Pyrotartaric acids. From Philosophical Transactions, 1861. By Maxwell Simpson, M.B., formerly Lecturer on Chemistry in the Original School of Medicine, Peter-street, Dublin.

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1. The British and Foreign Medico-Chirurgical Review and Journal of Practical Medicine. Published Quarterly. London: Churchill. (Received regularly.)

2. The Edinburgh Medical Journal. Published Monthly. Edinburgh: Oliver and Boyd. (Received irregularly.)

3. The Retrospect of Medicine, being a Half-yearly Journal; containing a Retrospective View of every Discovery and practical Improvement in the Medical Sciences. Edited by W. Braithwaite. London: Simpkin and Co. (Received regularly.)

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14. The Dublin Medical Press. Published Weekly. (Received regularly.)

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24. The American Medical Times; being a Weekly series of the New York Journal of Medicine. Published Weekly. New York. (Received regularly.)

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38. Mémoires de l'Académie de Médecine. (Received regularly.)

39. Revue de Thérapeutique Médico-Chirurgicale. Published twice a Month. Paris: Dr. A. Martin-Lauzer. (Received regularly.)

40. Journal de Médecine et de Chirurgie Pratiques a l'Usage des Médecines. Published Monthly. Par Lucas-Championnère. Paris. (Received regularly.)

41. Journal des Connaissances Médicales et Pharmaceutiques Published every ten days. Paris. (Received regularly.)

42. Annales Médico-Psychologiques. Par MM. Baillarger, Cerise, et Moreau. Published Quarterly. Paris: V. Masson. (Received regularly.)

43. Bulletin Général de Thérapeutique, Médicale et Chirurgicale. Recueil pratique. Par le Docteur Debout. Published twice a Month. Paris. (Received regularly.)

44. Répertoire de Pharmacie. Recueil pratique. Par M. le Dr. Bouchardat. Published Monthly. (Received regularly.)

45. Gazette Médicale de Strasbourg. Published Monthly. (Received regularly.)

46. Journal de Médecine de Bordeaux. Redacteur en chef, M. Costes. Published Monthly. (Received regularly.)

47. L'Union Médicale de la Gironde. Bordeaux. Published Monthly. (Received regularly.)

48. Annales D'Hygiène Publique et le Mèdecine Légale. Paris. Published Quarterly. (Received regularly.)

49. Gazette Médicale de Lyon. Dirigée par le Dr. P. Diday. Published Bimonthly. (Received regularly.)

50. Journal de la Physiologie de l'Homme et des Animaux. Publié sous la Direction du Dr. E. Brown-Séquard. Paris: Masson. Published Quarterly. (Received regularly.)

BELGIUM.

51. Mémoires et Bulletin de l'Académie Royale de Médecine de Belgium, Brussels. (Received regularly.)

52. Annales D'Oculistique. Fondées par le Docteur Florent Cunier. Published Monthly. Brussels. (Received regularly.)

63. Annales et Bulletin de la Société de Médecine de Gand. Published Monthly. (Received regularly.)

GERMANY.

54. Zeitschrift für rationelle Medicin; herausgegeben Von Dr. J. Henle und Dr. C. v. Pfeufer. Published Monthly. Heidelberg and Leipzig: C. F. Winter. (Received regularly.)

55. Vierteljahschrift für die praktische Heilkunde, herausgegeben volder medicinischen Facultät in Prag. Published Quarterly. Prague: Karn André. (Received regularly.)

56. Canstatt's Jahresbericht über die Fortschritte der gesammten Medicin in allen Ländern. Redigirt Von Pr. Scherer, Pr. Virchow, und Dr. Eisenmann. Würzburg: Stahel. (Received regularly.)

57. Medicin Chirug. Monatshefte. Erlangen. Fred. Enke.

58. Aerztliches Intelligenz-Blatt. Organ für Bayerns Staatliche und öffentliche Heilkunde. Munich: C. Kaiser. (Received regularly.)

59. Wochenblatt der Zeitschrift der k. k. Gesellschaft der Aerzte in Wein (Beilage zu den Jahrbüchern). Redigirt von A. Duchèk, J. Klob, A. Schauenstein. Published Weekly. Leipzig: Hinrichs.

PRUSSIA.

60. Archiv für pathologische Anatomie und Physiologie, &c. Herausgegeben von R. Virchow. Berlin: G. Reimer. Published Monthly. (Received regularly.)

61. Archiv für Klinische Chirurgie. Heraugsgegeben von Dr. B. Langenbeck. Redigirt von Dr. Billroth, Prof. der Chirurgie, und Dr. Gurlt, Docent der Chirurgie in Berlin. Berlin: August Hirschwald.

HOLLAND.

62. Archiv für die Holländischen Beiträge zur Natur-und Heilkunde, Herausgegeben von F. C. Donders, Utrecht, und W. Berlin, Amsterdam, Utrecht: C. Van Der Post. (Received irregularly.)

NORWAY.

63. Norsk Magazin, for Lægevidenskaben, udgivet af det medicinske. Selskab i Christiania. Redigeret af W. Boeck. Faye. A. W. Münster. Lund: Voss. Published Monthly. Christiania: Feilberg and Landmark. (Received regularly.)

SWEDEN.

64. Hygiea, Medicinsk och Farmaceutisk Manads-skrift. Published Monthly. Stockholm. (Received regularly.)

DENMARK.

65. Bibliothek for Læger. Udgivet af Direktionen for det Classenske Literaturselskab. Redigeret af Dr. E. Dahlerup. Copenhagen: Reitzels. (Received irregularly.)

ITALY.

66. Bulletino delle Scienze Mediche. Publicato per cura della Società Medico-Chirurgica di Bologna. Published Monthly. (Received regularly.)

67. Giornale Veneto di Scienze Mediche. Published Monthly. (Received regularly.)

68. Lo Sperimentale ovvero Giornale Critico di Medicina e Chirurgia per sevire al Bisogni dell Arte Salutare. Direttore Prof. C. C. M. Bufalini. Published Monthly. Florence. (Received regularly.)

NOTICES TO CORRESPONDENTS.

The valuable Retrospect of the Progress of Surgery during the Last Decade, commenced in the present number, will be concluded in the next; after which a Retrospect of the Progress of Medicine during the same period will be inserted, prepared by R. D. Lyons, M.D., Professor of the Practice of Medicine in the Catholic University and Physician to Jervis Street Hospital. Retrospects on Psychological Medicine, Therapeutics and Materia Medica, and on Midwifery, Physiology, Opthalmic Surgery, &c., &c., will follow.

We have added an extra Sheet to the present Number, to enable us to insert the article "In Memoriam."

The enlarged size of the page now adopted, affords room for an increased amount of matter, while the new type and fine paper improve the appearance of the Journal.

We have been obliged to hold over several Reviews and Original Papers.

Books and Periodicals published in Northern Europe and the German States, intended for our Journal, should be transmitted "For the Editor of the Dublin Quarterly Medical Journal, care of Messrs. Trubner and Co., *London," through their Correspondents* in the principal Towns on the Continent. Our Correspondents in France, Belgium, Italy, and Spain, are requested to communicate with us through "Doctor Higgins, 212, *Rue Rivoli, Paris.*"

AMERICAN Books and Journals often come to hand with such an amount of Charges on them, that we cannot release them. It is requested that *all* communications from the United States shall be forwarded to Mr. John Wiley, *New York;* or Messrs Blanchard and Lea, *Philadelphia,* directed to us, to the care of Messrs. Trubner and Co., *London.*